

Sh-30005

**PLANNING AND MANAGEMENT PROBLEMS FACING SMALL URBAN  
CENTRES IN KENYA: A CASE STUDY OF NYANSIONGO TOWNSHIP,  
NYAMIRA DISTRICT.**

**BY**

**FELIX LAMECH MOGAMBI MING'ATE**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE  
DEGREE OF MASTER OF ENVIRONMENTAL PLANNING AND MANAGEMENT  
OF KENYATTA UNIVERSITY.**

**JUNE, 2002**

Ming'ate, Felix  
*Planning and  
management problems*



2011/353095

## DECLARATION

I declare that this project is my original work and has not been presented for a Degree in any other University

Mimolafetei

**Felix Lamech Mogambi Ming'ate**

09/06/02

**Date**

The Project has been submitted with our approval as University supervisors:

Dr. Caleb Mireri

**Dr. Caleb Mireri.**

School of Pure and Applied Sciences  
Department of Environmental Planning and Management  
Kenyatta University.

25.1.2006

**Date**

Dr. Abraham Ndung'u

**Dr. Abraham Ndung'u**

School of Pure and Applied Sciences  
Department of Environmental Science  
Kenyatta University

June 2002

**Date**

**DEDICATION**

To my parents, **Agnes Kwamboka** and **Nahashon Ming'ate** who have been a great inspiration to me in my endeavor to explore the frontiers of knowledge.

## ACKNOWLEDGEMENT

First and foremost, I would like to thank my supervisors, Dr. Caleb Mireri and Dr. Abraham Ndung'u for their guidance, suggestions and encouragement throughout this work. I also most sincerely thank Dr. Otieno for his suggestions.

Sincere acknowledgement is made to the academic staff of the Department of Environmental Planning and Management for guiding me throughout my course work.

Special thanks goes to my brothers Dominic, Daniel and Boniface and my Sisters Jane, Jemimah and Rhoda for their continued encouragement throughout the programme. I must also thank my in-law Bernard Omoro for continuously supporting me in my endeavor to complete this work and finally accepting to bear the burden of printing my work for final submission.

I cannot forget my colleagues, Sammy, Caroline, Protus, Toure, Shallow, Eddah, Faith, Geoffrey, George, Charles, Akunga, Henry and Benjamin for their moral support during my course work.

I most sincerely thank Nyansiongo town council staff more specifically the town clerk Mrs. Jane Mogaka who made it easy for me to get the relevant information for my research. I cannot forget Mr. Nanyuki and Mr. Ontiri for sparing their working hours to show me around the township in my endeavor to collect information. I also most sincerely thank Mr. Roger Matara for recommending me to do my research at Nyansiongo Township.

My sincere thanks goes to my parents **Agnes kwamboka** and **Nahashon Ming'ate** for their support and sacrifice to see that I get knowledge.

I finally thank all those who in one way or the other assisted in the shaping of this work whose names I have not mentioned.

*May the Lord bless you all*

### ABSTRACT

Past experience has shown that there is rapid urbanization in most developing countries. Majority of the people are moving from the rural areas to the urban areas in search of services which cannot be offered in rural areas like social, health, educational and other services that satisfy human wants. This movement has strained the urban land uses and service delivery and institutional infrastructure of urban centres in developing countries especially in the major cities as their counterparts, small and intermediate urban centres decay due to lack or inadequacy of even basic amenities and services that will attract investors. Due to this strain, Planning and Management problems are evident in majority of the urban centres.

The main purpose of this study therefore was to examine the land use and urban service delivery and institutional infrastructure of Nyansiongo Township. The study finally came up with proposals within which planning and management problems of small urban centres can be solved. Primary and secondary data was used in the study. Stratified and systematic sampling was used for data collection. Purposeful sampling was used to get information from relevant bodies. Focused group discussions (FGDs) were used. Snowball sampling was used to get relevant information from relevant institutions. Data was collected through direct observation, use of questionnaire administration and use of interview schedule. Descriptive statistics was used for data analysis. Content analysis was used to analyze results from FGDs and interviews from various heads of institutions. Spearman correlation Coefficient and Chi-Square were used to show relationships. Excel was used to draw tables and graphs.

The results of the study show that service provision in Nyansiongo Township is of poor quality and inadequate. The researcher recommends that to improve the services, the Government, the community, NGOs, and CBOs should work together in improving the service provision of the township.

## TABLE OF CONTENTS

Declaration.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Abstract.....	v
Table of Contents.....	vi
List of Tables.....	viii
List of Figures.....	ix
List of Acronyms.....	x

### **HAPTER ONE: INTRODUCTION**

1.1 Background to the study .....	1
1.2 Statement of the Problem.....	4
1.3 The research questions.....	5
1.4 Objectives of the Study.....	5
1.5 Research premises.....	5
1.6 Justification of the study.....	5
1.7 Significance Of The Study.....	6
1.8 Scope of the Study .....	7
1.9 Limitations of the Study .....	7
1.10 Definition of operational terms.....	7

### **HAPTER TWO: LITERATURE REVIEW**

2.1 Town planning ideologies.....	9
2.2 Functions of Small and Intermediate Urban Centres.....	9
2.3 Urban Land uses .....	10
2.4 Urban service delivery .....	12
2.5 Urban institutional infrastructure.....	15
2.6 Growth Centre Theory .....	16

### **HAPTER THREE:STUDY AREA**

3.1 Location and Size.....	22
3.2 General Population Characteristics of Nyansiongo Township.....	25
3.3 Topography and Geology .....	26
3.3.1 Relief.....	26
3.3.2 Drainage.....	26
3.3.3 Soils and geology.....	26
3.4 Climate.....	28
3.4.1 Rainfall.....	28
3.4.2 Temperature.....	29
3.4.3 Wind.....	31
3.5 Vegetation.....	31
3.6 Land tenure: .....	32
3.7 Social Economic Set up .....	33
3.7.1. Agricultural Activities .....	33
3.7.2 Livestock production activities.....	33
3.7.3 Industrial Activities.....	33
3.7.4 Commerce Trade and Services .....	34

3.7.5 Constraints .....	34
-------------------------	----

#### **CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY**

4.1 Research Design.....	37
4.2 Sampling and Sample Description .....	37
4.3 Types and Sources of Data .....	39
4.4 Methods of Data Analysis .....	41

#### **CHAPTER FIVE: URBAN LAND USES AND SERVICE DELIVERY**

5.1 Household Characteristics.....	42
5.3 Land uses problems.....	48
5.4 Urban service delivery.....	52
5.4.1 Water supply .....	52
5.4.2 Energy supply.....	53
5.4.3 Health services delivery.....	54
5.4.4 Education services.....	56
5.4.5 Housing services.....	57
5.4.6 Waste collection and disposal.....	59

#### **CHAPTER SIX: INSTITUTIONAL INFRASTRUCTURE**

6.1 Nyansiongo township institutional infrastructure .....	61
6.2 Other Institutions Involved in Planning and Management of Nyansiongo Township..	71
6.2.1 Local Authority transfer fund (LATF) .....	71
6.2.2 K.T.D.A (Kenya Tea Development Authority).....	72
6.2.3 Ministry of health (M.O.H).....	73
6.2.4 Kenya prisons (K.P) .....	73

#### **CHAPTER SEVEN: SUMMARY OF THE FINDINGS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH**

7.1 Summary of the findings .....	74
7.3 Recommendations .....	76
7.4 Suggestion of areas for further research.....	81

BIBLIOGRAPHY.....	82
-------------------	----

APPENDICES .....	87
------------------	----

Appendix 1 .....	87
------------------	----

Appendix 2 .....	92
------------------	----

Appendix 3 .....	94
------------------	----

Appendix 4 .....	95
------------------	----

Appendix 5.....	96
-----------------	----

Appendix 6 .....	97
------------------	----

Appendix 7.....	96
-----------------	----

Appendix 8.....	97
-----------------	----

Appendix 9 .....	100
------------------	-----

**LIST OF TABLES**

Table 3.1: Area of the District by Division.....	22
Table 5.1: Incompatible Land Uses.....	52
Table 5.2: Water Supply Problems.....	53
Table 5.3: Energy Supply.....	54
Table 5.4: Enrolment in Government and Private Schools.....	57
Table 6.1: Current Operation Structure.....	64
Table 6.2: Qualification of Nyansiongo Township Workers.....	65
Table 6.3: Sources of Revenue in Nyansiongo.....	67
Table 6.4: Business Categories in Nyansiongo.....	70

## LIST OF FIGURES

Figure 2.1: Strategy for Planning and Management of Small Urban Centre.....	20
Figure 3.1: Location of Nyamira District.....	23
Figure 3.2: Nyamira District Administrative Boundaries.....	24
Figure 3.3: Location of Nyansiongo Township.....	25
Figure 3.4: Rainfall Distribution.....	29
Figure 3.5: Minutes Rainfall Intensity in Nyansiongo.....	30
Figure 3.6: Nyansiongo Monthly Maximum and Minimum temperatures.....	31
Figure 5.1: Family Size.....	42
Figure 5.2: Age Structure.....	43
Figure 5.3: Literacy Levels.....	44
Figure 5.4: Income Levels.....	45
Figure 5.5: Nyansiongo Township Population Growth Rate Trend Over 20 years Span.....	46
Figure 5.6: Reasons for Movement.....	48
Figure 5.7: Major Land Uses in Nyansiongo.....	50
Figure 5.8: Disease Cases.....	56
Figure 5.9: Rent Rates in Nyansiongo.....	59
Figure 6.1: Nyansiongo Township Structure.....	62

**LIST OF ACRONYMS**

ECLA-Europe, Caribbean and Latin America,

FGD-Focused Group Discussion

FGDs-Focused group discussions

KTDA-Kenya Tea Development Authority

LATF-Local Authority Transfer Funds

MOH – Ministry of Health

NGOs-Non-Governmental Organizations.

SPSS-Statistical Package for Social Sciences

UN- United Nations

UNCHS- United Nations Centre for Human Settlement

UNDP-United Nations Development Programme

NSSF-National Social Security Fund

NHIF-National Hospital Insurance

PAYE-Pay As You Earn

LADP-Local Authority Development Programme

LASDAP- Local Authority Service Delivery Action Plan

## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background to the study

The ties between urban and rural economies have been crucial in promoting a widespread development in richer countries and are more likely to become more important as rapid urbanization continues in developing countries (Rondenille, 1983). These linkages are crucial because the major markets of agricultural surpluses are in urban centres, most agricultural inputs come from organizations based in cities, workers seek employment in towns as rising agricultural productivity frees rural labour, and many of the social wealth, education and other services that satisfy basic human needs in rural areas are distributed from urban centres.

Despite the attention given by researchers to large cities and metropolitan areas, most of the third world's inhabitants live outside urban centres with 100,000 or more inhabitants. In Africa and Asia more than three-quarters lived outside settlements of 20,000 or more inhabitants (Hardoy and Satterthwaite 1986).

About 36% of the world's population lives in small urban centres and towns. In 1965, less than one quarter of the population of low and middle-income countries was urban. By 1990 that proportion had increased to roughly half. By the year 2025, it is estimated that more than two thirds of the population of developing countries will be urban (UNDP/UNCHS/World bank 1994).

Majority of Kenya's urban population increase is and will still continue to be mainly due to rural urban migration. This influx of large numbers of people into Kenyan's urban centres will put an added strain on services and facilities. At the same time, it will affect the development of the rural areas because young people and the educated will have the propensity to join the rural urban migration exodus (Obudho R.A. in African Urban Quarterly 1988).

Obudho, in African Urban Quarterly (1988) notes that, to solve this, the strategy for development for Kenya should be directed towards the small and intermediate urban centres. This will ease the population pressure in the country side, provide less congested and populated urban living in the primate city, increase modernization spin-off which urban centres provide to the surrounding rural areas and provide a better integration with the economy of rural hinterland.

The government of Kenya adopted a growth centre strategy by selecting seven small or intermediate urban centres as growth centres in the 1970-74 plan (Kisumu, Kakamega, Nakuru, Eldoret, Nyeri, Thika and Embu). Another two were added in the 1979-83 plan (Kitale and Meru). The 1974-78 and 1974-83 plans also outlined a national service centre hierarchy through which the government aims to reach 90 % (percent) of the population with 86 urban centres 420 market centres 1,015 local centres and 150 rural centres. Each category aims at a different mix of services and infrastructure for the surrounding area (Richardson 1980, Kenya, Republic 1975 and 1979). During this time Nyansiongo town was in the category of the market centres and it was called Chepnyalili (Kenya, Republic, 1979).

Despite the efforts made by the government and the NGOs in planning and managing urban centres, majority of them, particularly those in developing counties are facing tremendous problems in managing their growth. The urban crisis manifests itself in declining and stagnating

urban economies, diminishing employment, uncontrolled expansion (urban sprawl) accompanied by growth of informal settlements, decline in the quality and distribution of basic services and a decline in the quality of the environment, both built and natural. All this affects adversely the quality of urban life particularly for low-income groups (UNCHS (Habitat, 1999).

Further, UNCHS (Habitat) (1999) in an attempt to localize agenda 21, discovered that, most local authorities, county, municipal and town councils do not have the technical capacity to play their role effectively due to lack of skilled personnel and elaborate enforcement machinery. As such, they rely on the office of the director of physical planning to undertake the preparation of physical development plans (structure plans, development plans, Zoning /advisory plans and short term development plans) for the small urban centres. Under such circumstance, the plans are deemed prepared by the director of physical panning on behalf of the local authority. In addition to the director of physical planning, they also rely on other agencies such as the provincial administration and the regular police to execute their development control decisions and enforce the planning regulations, by laws and standards.

The government of Kenya in collaboration with both the UNCHS (1999) also noted other problems of planning and management of small urban centres such as, lack of community consensus plan making process and the use of traditional methods of urban planning. The master plans have been criticized for being over ambitious in the attempt to be comprehensive. Hence making the planning process too long. More critically is the inability and inappropriateness of such plans in dealing with the uncertainties of urban dynamics in the rapidly changing urban scene. Many of these plans were physical and did not reflect the real requirements of economic progress, political stability, and social harmony. The net effects of the inadequacies are that urban development and growth have long taken out of planning 'rules of the game'. Informal

settlement deteriorating quality of the living environment decaying urban infrastructure and stagnating economies among other problems now characterize the human urban settlements in the developing countries which are now posing planning and management problems.

## **1.2 Statement of the Problem**

The future of our towns is as important as the future of our nations. In fact the future of our urban areas is synonymous with the future of our culture and our survival as a people. The village, the town and the city have been at all times the birthplace of human progress and new thought. It is unfortunate that the urban areas have not been matched with thorough planning (Hutton, 1972).

Mumtaz and Wegelin, (2001) supports Hutton by arguing that majority of the countries have been producing significant proportion of their wealth through urban activities. They further note that urban areas are the engines of growth than the countryside. They provide the prospect and the possibility of prosperity. However they note that they also result into the spectra of misery, brutality, environmental degradation and chaos resulting from improperly planned urban centers.

Small urban centers have been noted to have these planning and management problems despite the role they play in national development. Small urban centers lessen the tendency of concentration of industries, services and government officials in a few urban areas and at the same time play a major role in managing urban expansion within large cities by attracting some immigrants who should otherwise go to large cities. Urban land uses, service delivery and institutional infrastructure in most small urban centres are in serious problems.

These problems can only be addressed by a thorough and introspective research of this kind, whose purpose was to examine the land uses, urban service delivery and institutional infrastructure of Nyansiongo Township.

### **1.3 The research questions**

The following research questions guided the study:

1. What are the planning and management problems facing Nyansiongo township?
2. How effective is the institutional infrastructure of Nyansiongo in planning and management of the town?
3. Are there any proposals within which planning and management problems of Nyansiongo Township can be solved?

### **1.4 Objectives of the Study**

In order to answer the research questions, the study pursues the following objectives:

1. To examine the land uses and the urban service delivery of Nyansiongo Township.
2. To examine the institutional infrastructure of Nyansiongo Township.
3. To formulate proposals, for effective planning and management of Nyansiongo Township and other small urban centres like Nyansiongo.

### **1.5 Research Premises:**

The study was based on the following assumptions:

1. Nyansiongo Township is faced with a number of land use and urban service delivery planning and management problems.

2. The institutional infrastructure of Nyansióngo Township is weak and cannot provide adequate services

### **1.6 Justification of the Study**

Nyansiongo Township was selected for study due to various reasons; First, because of the increasing rate of urbanization in Kenya, there's need to improve the small urban areas to provide adequate urban services that can guarantee quality urban life and attract investors.

Second, the research was carried out in Nyansiongo because it depicts planning and management problems. These problems include; poor land use systems and urban delivery systems and poor arrangement of institutional framework for the planning and management of Nyansiongo Township.

Thirdly, Nyansiongo town is an administration centre. It is the divisional headquarter thus it requires development to support the activities of a divisional headquarter.

### **1.7 Significance of the Study**

The study came up with policy proposals that will help in solving the problems of planning and management of small urban centres. The study will contribute to the pool of knowledge, which is vital for the current and future scholars. The study will assist NGOs like Habitat, policy makers, planners, and academic institutions with information for solving their long-term problems of human settlement in urban areas.

### **1.8 Scope of the Study**

The study focused on problems of planning and management of Nyansiongo Township. Emphases were laid on the identification of the problems of land uses and urban service delivery within Nyansiongo Township. It then focused on the institutional infrastructure of Nyansiongo Township. Finally it came up with proposals for solving the problems of planning and management of Nyansiongo Township.

### **1.9 Limitations of the Study**

The researcher had financial problems because of the depth of what was to be covered, which required a lot of money to cope with.

Lack of enough time by the researcher to conduct his research due to the fact that the time assigned for the research was too little compared to the needs and demands of the research was a major constraint.

The researcher used secondary data for his research. Part of the data used was not research specific and so the researcher was forced to pick only specific data for his research, which was not easy.

### **1.10 Definition of Operational Terms.**

The study used several terms and concepts, some of which are defined below:

**Environment:** this is the aggregate of the surrounding things, the living and the non-living and the condition that influence the life of any organism or population including human beings.

**Environmental problem:** the degradation (cause less deserving of respect) and depletion (to use up or empty until little or none remains) of environment assets and the degradation of the rural and urban living environment.

**Management:** this refers to the ability to control and make decisions on the problems of planning and management of the problems of urban centres.

**Small town:** These are urban centres with population of less than 100,000 people (Bernstein, 1994)

**Intermediate Towns/secondary towns:** These are towns with population of between 100,000 and 500,000 people (Bernstein, 1994)

**Large cities:** These are towns with a population ranging from 500,000 to 2 million people (Bernstein, 1994)

**Community participation:** This refers to the effective involvement of the local community in matters affecting the planning and management of urban centres.

**Planning:** refers to thinking towards making of advanced arrangements usually in the known and the anticipated needs. It is the art of ordering, organizing and controlling available resources.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Town planning ideologies.

Foley (1960), addressing British social scientists found that the British planning is comprised of not one ideology but three, which were often in mutual conflict. First, he found that planning in Britain was concerned with, reconciliation of competing claims for use of limited land so as to provide a consistent, balanced and orderly arrangement of land uses. The second element of ideology was to provide a good (or better) physical environment for the promotion of a healthy and civilized life. The third element he identified was providing the physical basis for better urban community life.

#### 2.2 Functions of Small and Intermediate Urban Centres.

Small and intermediate urban centres have been considered useful in third world countries because of several reasons. First, is the fact that it's the small or intermediate urban centres with which rural people and rural enterprise interact. Second, it is through such centres that the needs and priorities of sub-national and sub-regional populations should be channeled to influence policies and resource allocations of higher level of government. Third, these centres play an important part in many national government priorities, for instance, national goals such as: increasing agricultural production or productivity or replacing imports with production, imply for increased investment infrastructure services and facilities within or serving small and intermediate urban centres. Fourthly, small towns lessen the tendency to undesirable concentration of industries, services and government officials in a few (or just one or two) urban centres. Fifthly, small and intermediate towns play a potential role in managing urban expansion within large city regions by attracting some migrants who could otherwise go to the larger cities (Hardoy and Satterthwaite 1986)

The UNCHS (Habitat) (1986) and Rondenilli (1983), identified the following functions provided by the secondary and small cities: they offer good location decentralizing public services as well as alternative sites for commercial, industrial and other production activities; they also offer a variety of distribution storage, brokerage, credit and financial services; they serve as outlets for agricultural goods, function as centres for small scale industries, they form as centres for social transportation for rural migrants accommodating and encouraging the integration of diverse social, ethnic and religious groups.

Kingdom (1991) identifies two main categories of functions administered by the local authorities: Those delivered to the community, and those needed to sustain itself. According to him, the latter are termed as house keeping functions or the management functions and they include; land, personnel and finance. The community functions he identified are;

*Protective:* fire, police, and consumer protection.

*Environmental:* roads, pollution control, and planning.

*Personal:* education, career, housing, and social services.

*Recreational:* parks, leisure centres, theatres, and art galleries.

*Commercial:* markets restaurants and transport.

### **2.3 Urban Land uses**

As demand for limited supplies of urban land rises, low-income groups may be forced to occupy illegal unserviced subdivisions often on the periphery of cities. The urbanization process also may exert pressure on sensitive ecosystems. The poorly managed development may also cause excessive urban sprawl and negative impacts on air quality, energy consumption, and aesthetic quality. Bernstein, D (1994) identifies six key factors that perpetuate land use problems and they

include: inappropriate regulation, lack of tenure security, inadequate infrastructure capacity, inadequate information, inappropriate pricing and taxation, and weak institutions and poorly coordinated actors in the market.

As pressure for urban development intensifies, agricultural land on the periphery of the towns get converted to urban land uses. In Sabotage in Indonesia, an area that includes all areas of the Kabupans of Bogor, Bekasi Karawang and Kangerang, urban land use expanded by 17% during 1980 to 1985. In Egypt, more than 10% of the nations most productive farmland has been converted to urban land use during the last 30 years largely through illegal squatting or subdivision (Hardoy and Satterthwaite 1989). Between 1940 and 1990, Mexico City's areas grew almost tenfold. In terms of land area, Jarkata, and Mexico City are converting between 2,000 and almost 5,000 hectares of land each year (Bernstein 1994).

Bernstein (1994) continues to note that, in many countries, excessive land survey regulations, tilting requirements and subdivision approval requirements present costly bottleneck in acquiring and developing land. The time and cost involved in resolving the disputes and obtaining clear title deeds leads many households to obtain settlements or subdivisions, often located on hazard prone areas. In Kuala Lumpur, Malaysia, for example, stringent development standards and complicated –time consuming procedures to obtain the necessary subdivision approvals from 55 separate government departments were principal factors accounting for the increase in new housing prices by 3 to 4 times the annual income of a typical urban household in the 1970s to 5.5 to 7 times the average annual income in the 1980s. During the same period in Bangkok, Thailand, where the entire subdivisions approval process takes approximately 100 days, the entire price of housing fell over the same period from roughly 5 times the annual income in the 1970s to about 2.5 times the annual income in the mid-1980s (Bernstein 1994)

UNCHS (Habitat) (1999) notes that despite various reviews of the land acts aimed at increasing effectiveness in addressing land development issues and to improve the tenure system for development purposes, not much has been achieved. In Nigeria, for example the land use decree promulgated in 1978 was intended to eliminate the various anomalies associated with land acquisition. However Arimah (1997) notes that the situation on the ground is that the land use decree of 1978 has made land access by the poor extremely difficult. This calls for a review of the decree to enhance access of the urban poor to existing urban land.

In most areas in Kenya, Botswana, Nigeria and Zambia where land is owned by the city or town councils there has been a corresponding lack of clear guidelines on the allocation and building standards in most shanty areas UNCHS (habitat) (1999). In fact land allocation in these countries is not sympathetic to the needs of low income unplanned areas. UNCHS (1999) continues to note that many plots in Tanzania have been largely allocated according to monetary, political or social influences.

#### **2.4 Urban service delivery**

Rondenelli and Chema (1985) in their study on provision of services to the poor in developing countries found that, the future governments in developing countries will find it increasingly difficult to extend infrastructure and services to the poor through conventional public service delivery arrangements, or to provide adequate shelter through public housing programmes. The cost is already prohibitive. Moreover, public bureaucracies in many developing countries, lack sufficient managerial capacity to meet the growing needs of the poor for shelter and services.

Rondenilli, A.D. (1985) and UNCHS (Habitat) (1987) argue that whether secondary cities and towns grow as result of the government policies or not their development creates new and more complex social, physical and economic problems. They continue to note that new demands are made by growing population for basic services, the extension of infrastructure and facilities, better jobs, housing education and healthcare and for amenities associated with urban living.

According to Rondenelli (1983), investment in services and facilities in secondary cities have been inadequate to keep pace with population growth and attract professional skilled workers and private investors even in countries that have relatively high rates of economic growth.

Despite relatively high income in urban populations, the quality of services in major cities is poor. At least 170million people in urban areas lack a source of potable water near their homes, and in many cases, the water that is supplied to those who have access is polluted and nearly 350 million people in urban areas lack access to basic sanitation (World Bank 1992).

World Bank (1990a) indicates that the data on the coverage of education and health in urban areas are not available, and that the aggregate statistics for third world countries are disturbing; in half of low-income countries, fewer than half of the school age children are enrolled in primary schools. UNCHS (Habitat) (1992) notes that although educational and health facilities were easily accessible in Sri-lanka, both in physical and financial terms, as they were free, there were considerable variation in quality.

In the case of housing provision, UNCHS (Habitat 1992) notes that limited urban land in Sri-lanka was a limiting factor towards housing provision and that competition for its use caused rapid escalation of prices. UNCHS (1992) continues to note that in 1981 in Sri-lanka, only 42%

of the housing units were constructed of permanent materials, only 8% of the countries housing stock had piped water, 60% of that households accommodated households in only one room. Space standards were found to be appalling, with a gross area of less than 16 metres per unit and only 5% had flush toilets,

In many urban centres, in developing countries, less than 7% of municipal solid waste is collected and only 5% of the households are served. (Bartone, Bernstein, and Wright 1990). UNCHS, (1996) further notes that most countries are experiencing mounting problems with the collection and disposal of sold wastes. In high-income countries, the problem usually center on the difficulties and high cost of disposing of the large quantities of waste generated by households and businesses. In lower-income countries the problems are more to deal with collection. In most countries to the south, between a third and half of the sold wastes generated within urban centers remain uncollected and such wastes generally accumulate on open spaces, waste land and streets and bring with them serious health and environmental problems.

In Dar es Salaam, some two thirds of all waste solids from both residential areas and commercial enterprises are uncollected. In Kinshasa the collection of household waste is undertaken only in a few areas. In the rest of the city, household waste is put on the road, on illegal dumping or on storm water drains or buried on open spaces. In Karachi, only two fifths of the sold wastes produced by households in the city is collected and transported to the dumpsites and in Jakarta around 40% of the sold waste produced by the households in Jakarta are not collected, much of it ends up in rivers and canals and along the road side were it clogs drainage channels and causes extensive flooding during drainage.

## 2.5 Urban institutional infrastructure

At the level of small urban centre, Hermitte and Herran (1977), note how the local government in Huarco, the administrative centre of a department and also the nearby intermediate urban centre of Catamarca which is provincial capital have very weak fiscal bases and are strongly dependent on funds from the National government. The same is true in Tunisia's two urban centres Testour (Hopkins 1979) and Medenine (Lee 1979). Despite the fact that Medenine is a regional capital, regional plans lack any long-term development strategy based on local needs and resources, (Hardoy and Satterthwaite 1986).

In World Bank paper about strengthening local government, Cochrane (1983), noted that many local governments are fragmented, confused about their functions and or too often either invisible or largely ceremonial.

Townroe (1982) notes that even in Sao Paulo state, Brazil one of the richest and most industrialized areas in Latin America, municipalities' ability to raise finances either to offer industrial incentives or to prepare infrastructure improvements and factory sites in advance of demand is very circumspect. In Thailand, total municipal expenditure in all urban centres other than Bangkok was less than one percent of total public expenditure in 1980 (ESCAP 1984).

In discussing the factors that affects the costs of providing urban services in developing countries, including planning, standards, economic capacity, resource mobilization arrangements and revenue structure, Rondinelli and Cheema (1988) compares the economic and financial resources available for urban service provision in Asian countries. They then conclude that the revenue raising authority and capacity of municipal governments must be expanded substantially

if they hope to satisfy growing service demands. Yet they further emphasize that public revenues alone will be inadequate. An important aspect of public therefore must be to encourage maximum participation of the private sector in providing urban services.

Graham, (1980) in his study of local government in Latin America notes that the impact of centralization and concentration of bureaucratic power in the nation's capital no matter how dispersed it's actual application may be within individual agencies and ministerial divisions, is such that few services can be provided at the local level that are not the function of some field organ of a central government ministry or autonomy agency. Rondenelli (1983) supports Graham by noting that municipal governments have responsibilities only for land use planning, fire protection, to carry out these tasks, markets and parks, primary education and refuse disposal and that they even depend on the central government for revenue.

## 2.6 Growth Centre Theory

There have been many attempts by governments to stimulate urban and industrial development in small and intermediate urban centres in regions labeled as "backward" or "lagging" or "peripheral" (Hardoy and Satterthwaite 1986). These attempts have often gone under the name of growth centre policy.

Growth centre policy entails designation of selected medium and small urban centres as growth centres. The government concentrates investment of scarce resources in infrastructure and services of the growth centres to make them attractive for investment and human settlement. In the long run growth centres should generate self-sustaining growth and development in the centres and their hinterlands (Mireri, 2000).

Nyakaana (1986) defines growth centre as an urban centre of economic activity which can achieve self sustaining growth to the point that the growth is diffused into the pole region and eventually beyond into the less developed regions of the nation.

The growth centre policy has not been clear to most people and this has contributed to a great extent to its failure to achieve its goals. Gilbert and Gugler (1983) note the term growth centre includes "everything from the village of 5000 people to the world's largest metropolis, industrial areas, administrative centres, university cities and sleepy market towns. They further notes that it is not the regional approach which is villain but they development model which limits and dictates the manner of use.

The growth centre policy has been successful in addressing regional disparities in development. However, the success of the growth centre policy depends on the individual country's ability to develop appropriate criteria to implement and assess the policy (Mireri, 2000).

Despite the major aim of stimulating the small and intermediate urban centres, the growth centres based on industrialization to stimulate development in the small and intermediate surrounding regions have been described in many case studies and criticized in theoretical papers for being ineffective for a variety of reasons (Friedmann, 1981).

Stohr and Todtling (1979) have summarized the failings as follows: First, the growth centre may have proved to be a much smaller stimulus to surrounding regions than was first expected. The stimulus was often counteracted by negative effect such as, migration from the hinterland to the urban centres to look for job opportunities thus leaving the aged and the young kids who cannot be able to till and provide food for both the urban dwellers and for themselves. Secondly,

increases in rural incomes or in incomes in smaller urban centres create strong multiplier links in larger urban centres.

Hardoy and Satterthwait (1986) note another reason for failure of the growth centre model to function well as a result of most policies concentrated on stimulating industrial development in designated centres. They continue to note that the uneven results of policies of growth centres in planning tools to redistribute urban and industrial development lies in the fact that the term growth centre has been used to cover so many different kinds of policy intervention

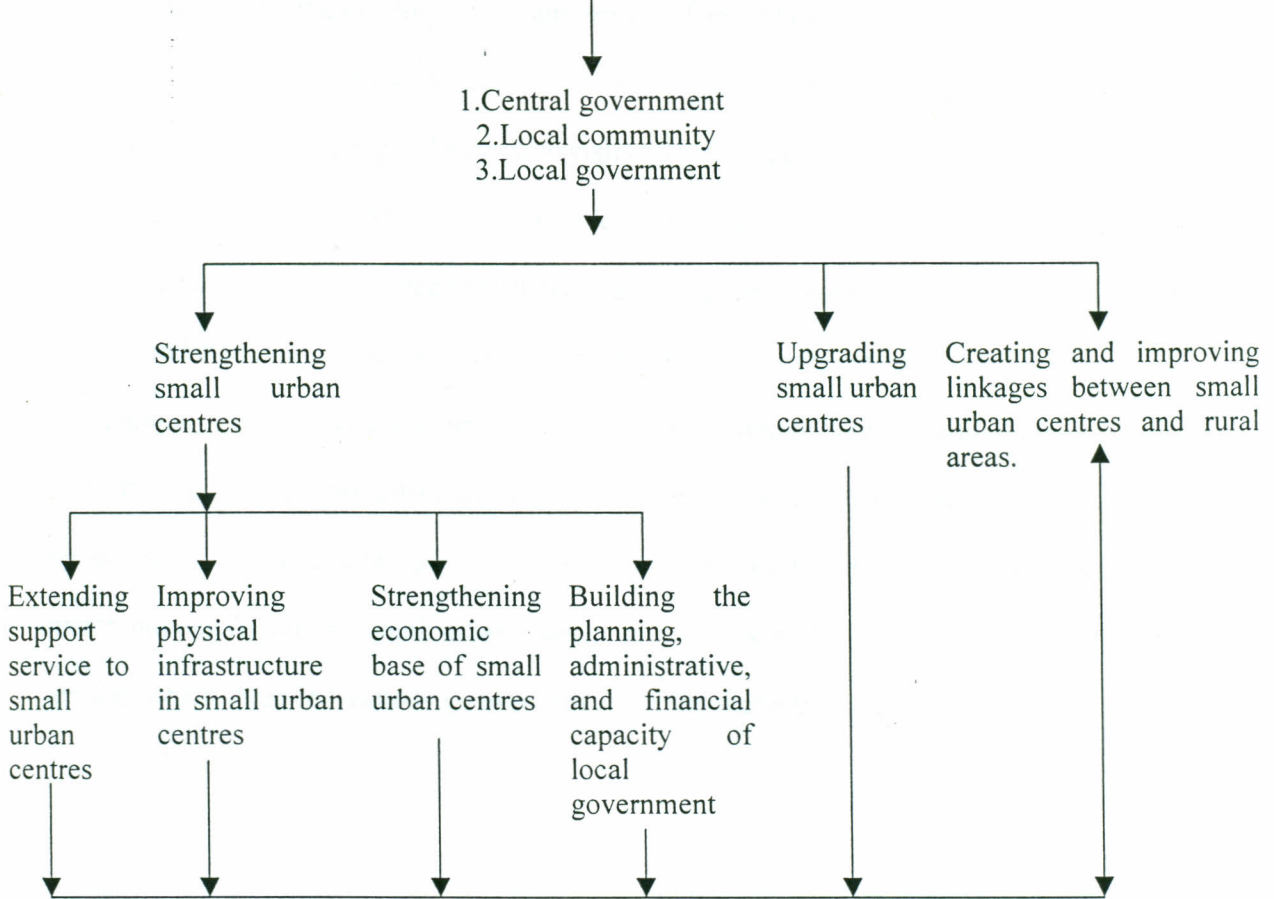
Ngethe and Ngonyi (1991) argue that the growth centre strategy has experienced problems because the criteria for the selection of these urban centres are political. There has been lack of sufficient funds to at least raise most of the urban centres to a take off stage. The growth centres and the service centres were based on the top-down approach, which failed to trickle down any benefits due to the slow pace with which these urban centres have developed. Instead, adverse backwash effects have created increased inequalities between the rural and urban areas.

A report on middle rank human settlements in territorial organization strategies in Latin America and the Caribbean (ECLA/UNCHS1984) lists a series of failings in policies to stimulate intermediate and small centres. These include; imprecise diagnosis of existing circumstances in such centres and their regions of influence, simplistic and obviously piecemeal understanding of the factors behind its development, a lack of integration of proposed policies with micro-development policies and sartorial priorities, inadequate recognition of factors and aspects specific to each centre, and unrealistic and imprecise projection of needed investment to implement proposed policies.

Richardson (1980) critically evaluates Kenya's urban development strategy as first outlined in the 1970-74 national development plan. He criticises the idea then current within the Kenyan government that Nairobi is becoming too big and suggests that it would be incorrect to base a growth centre strategy on this belief. Richardson suggests that given effective planning, even a Nairobi with more than four million inhabitants would be quite acceptable. However he does point out that there is a strong centre growth strategy if it were based on Kenya's comparative advantage in agriculture and resource based industries and on its policy objectives emphasizing rural development.

## 2.7 Conceptual Framework for Planning and Management of Small Urban Centers

Figure: 2.1 Strategy for planning and management of small urban centres



Source: Researcher

Small urban areas have more often than not suffered because of lack of guidelines for planning and management. The conceptual model above gives the strategy for planning and management of small urban centres. The model suggests four major areas of intervention to enhance proper planning and management of small urban areas. To begin with, extension of support services to small urban centres such as basic housing, improvement of basic social services, solid waste collection service provision, supply of water, energy, health and education facilities is very essential for the support of the development of small towns. Improved physical facilities such as transport and circulation system, well managed and developed land uses and controlled land

costs enhance development of towns as well as solve the problems associated with unplanned settlement and taking up of any fragile land by the low income urban dwellers. Strong economic base is essential for the planning and management of any municipal, or county council. These can be achieved through the expansion of the commercial activities, building market centres and rural urban linkages and expanding and diversifying small-scale industries. The building of the planning, administrative and financial capacities is essential for the planning and management of small urban centres. There is need for increasing inter-government transfers (LATF), providing training and managerial assistance creating special funds for investment in small urban centres for example the benefits got from land leaseholds and expanding tax and revenue raising authority. Upgrading small urban centres by providing them with services like their counterparts, the secondary and large cities is very essential. There is need to create rural urban linkages to attract individuals into this small urban areas to invest for example by providing and availing the services which these individuals go to search for in the secondary and larger cities.

## CHAPTER THREE

### 3.0 STUDY AREA

#### 3.1 Location and Size

Nyansiongo town is located in Nyamira District. It attained its township status in 1998. Nyamira district is one of the nine districts that make up Nyanza province. The Nyamira district shares boundaries with Rachuonyo District to the North, Transmara District to the south, Kericho District to the east, Kisii District to the west and Bomet District to the southeast. The District lies between latitude "030 and 045" south, and longitude 34 45" and 35 00" east. The area of the District is approximately 879 Km<sup>2</sup> among 5 divisions as indicated below. Figure 3.1 shows Nyamira district boundaries.

**Table 3.1 Area of the District by Division**

DIVISION	AREA (SQUARE KILOMETRE)
Nyamira	180
Ekerenyo	215
Borabu	252
Manga	91
Rigoma	141
Total	879

Source; 1999-Population Census – District Statistical Office Nyamira

Nyansiongo town council is found in Borabu division, which takes the greatest part of Nyamira District. It is estimated that the Nyansiongo town council covers approximately 88.9 Km<sup>2</sup> (Republic of Kenya 1999). The town is about 370 km from Nairobi and 140 Km from Kisumu. The figure 3.3 shows the location of Nyansiongo Township

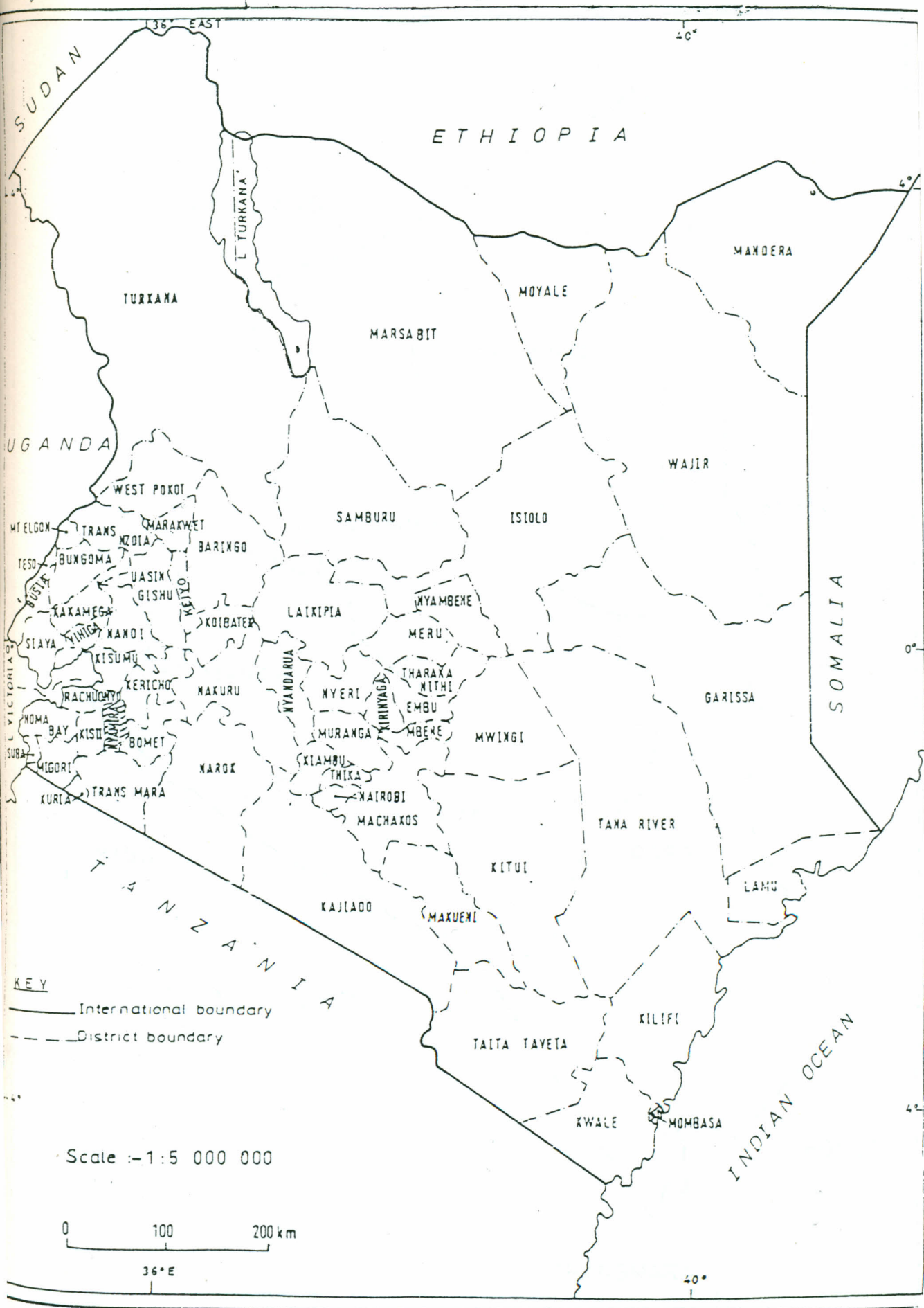


Figure 3.1 Location of Nyamira District  
 Source: Kenya (1997-2001)

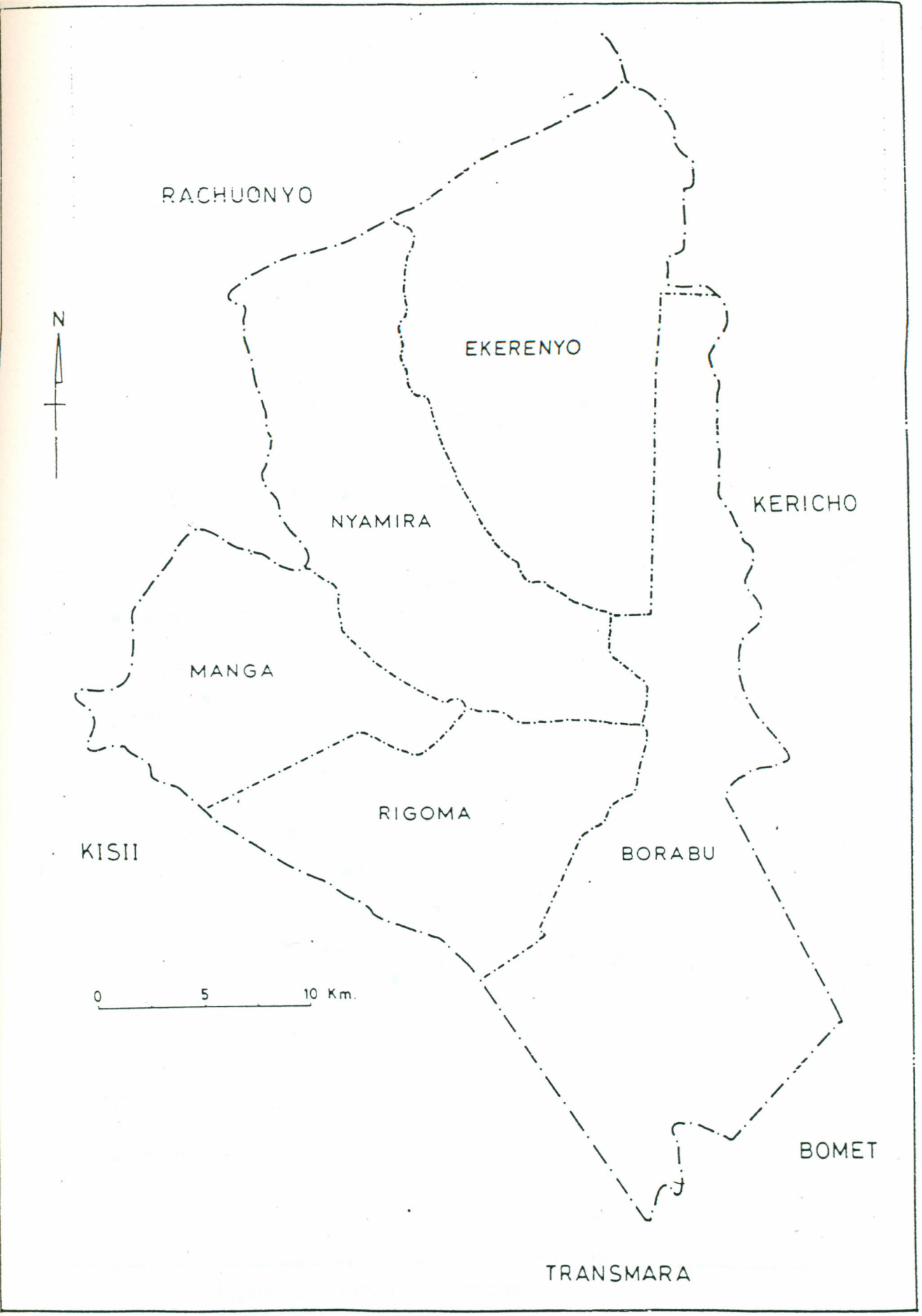


Figure 3.2: Nyamira District Administrative Boundaries  
Source: Kenya (1997-2001)

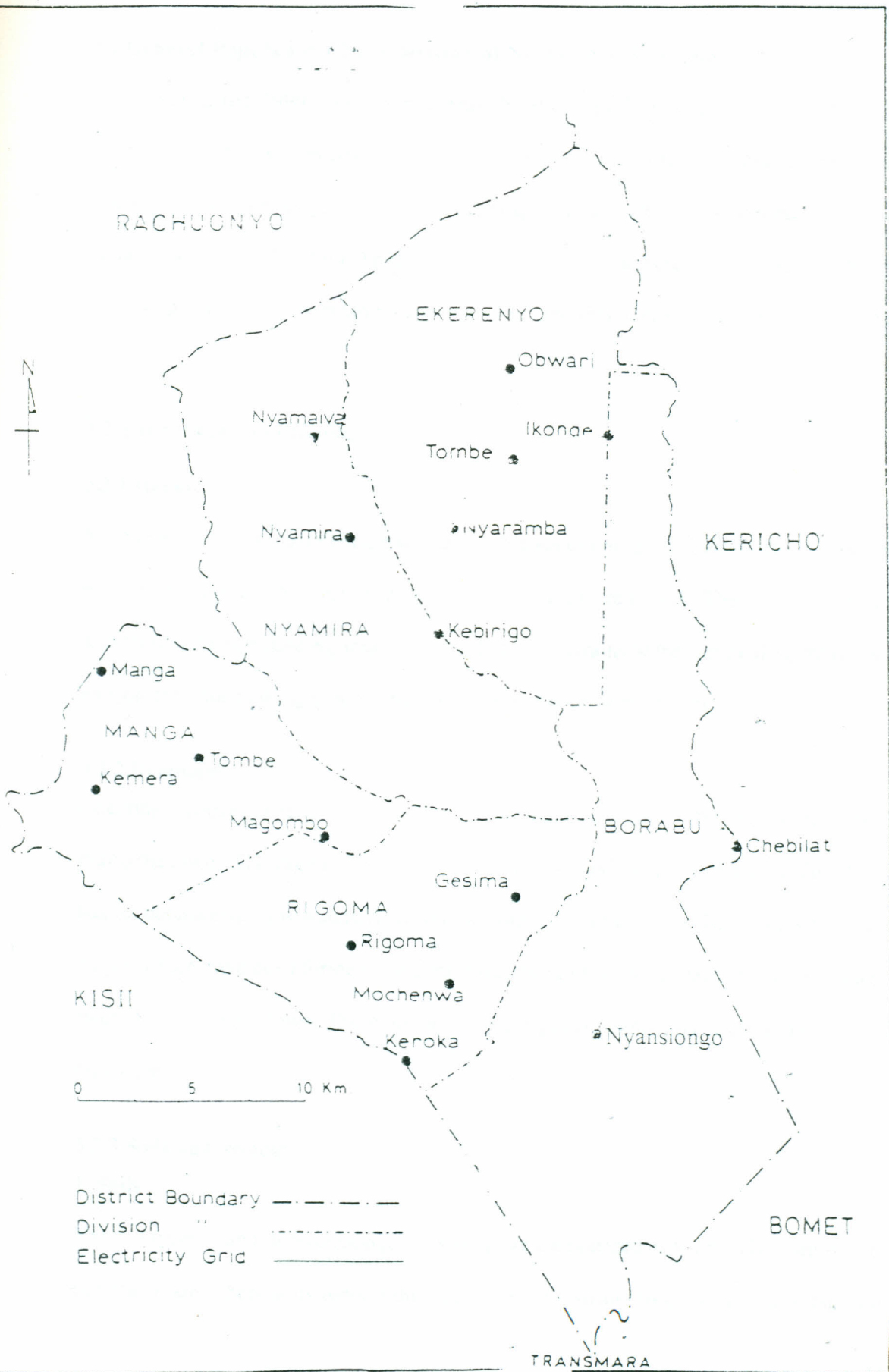


Figure 3.3 Location of Nyansiongo  
Source: Kenya (1997-2001)

### **3.2 General Population Characteristics of Nyansiongo Township**

According to the 1999 population census, Nyansiongo Township has a total population of 23,191. Out of this population 12,009 are male and 11,182 are female. There are 4,790 households in Nyansiongo Township occupying an area of 88.9 square kilometres. The density of the population is 261 people per km<sup>2</sup>. These indicate that there is land scarcity in Nyansiongo Township, which is now posing major planning, and management problems in the town.

### **3.3 Topography and Geology**

#### **3.3.1 Relief**

Nyansiongo town is located in the western highlands draining into Lake Victoria. The town lies between an altitude 1600 metres and 1900 metres above sea level. The town lies on fairly flat area though the surrounding areas are hilly. The hilly terrains of the surrounding areas lead to soil erosion and thus making construction and maintenance of road network costly.

#### **3.3.2 Drainage**

One major stream arising from the eastern highlands (Gechauri) flowing to the western side drains the town. The stream is permanent as the region has high and reliable rainfall. The stream has cut deep and narrow watercourse trough, which the water flows. The town is also drained by ridges, which have been formed along the roads by rainfall, which leads their dirty water to the river in Nyansiongo town. There are no drainage gutters, which have been made to drain the rainwater.

#### **3.3.3 Soils and geology**

##### **1. Soils**

The soil types found in Nyansiongo Township are categorized as friable clay, sandy loam, and rich clay roam. These soils support the cultivation of cash and food crops. The soils found in the

valley bottoms are mainly clay soils, which are sticky, and water logging in nature. They are used in making bricks and tiles though the potential has not been fully harnessed. The land utilization corresponds to the areas best suited for the various crops and livestock. The hilltops within the surrounding neighbourhoods, which are not suitable for agriculture, are used for forestry, and grazing purposes. These fertile soils have played a major role in the urban rural linkages in that the rural community grows crops like vegetables, tomatoes and maize, which the urban people buy. This provides the rural people with income thus creating rural urban linkages..

According to the farm management hand book of Kenya volume 2 western, Nyansiongo Township and its surrounding hinterland has two agro-ecological zones, as indicated below:

LH1= lower Highland – Dairy Zone

LH2= Lower Highland Maize – Wheat/ Pyrethrum Zone

UM1 = Upper Midland Coffee – Tea Zone

The lower highland tea-dairy zone (LH1) has deep well drained reddish brown friable clay which has thick topsoil's. The soils support growing of tea and rearing of dairy cattle, which are the major economic activities within the Nyansiongo town hinterlands.

The lower highland maize – wheat/pyrethrum zone (LH2) has well drained soils, which range from dark red to reddish, friable sandy clays. These support growing of maize, pyrethrum and wheat though the Nyansiongo hinterland grows maize in plenty. This growing of wheat and pyrethrum has declined tremendously because of poor marketing methods and corruption. Majority of the people are now growing tea.

## **2. Geology**

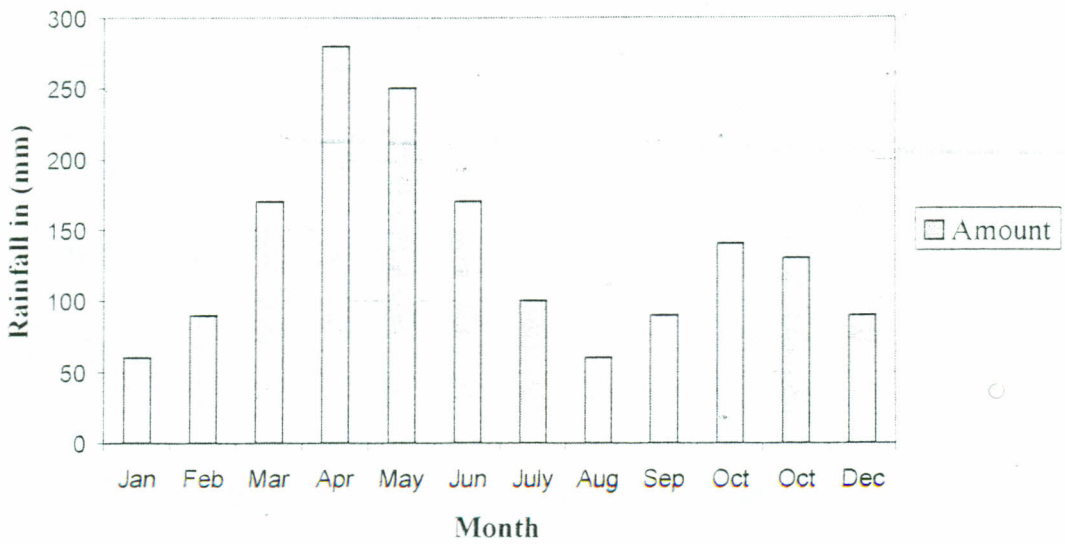
The principal rock formation in Nyansiongo consists of felicities, quartz and Basalt. The rock formation is on average 9-12 meters below the soil surface. In a few sections, this rock formation is exposed and some of these points are quarry sites (Nyamira District Development Plan 2001).

## **3.4 Climate**

### **3.4.1 Rainfall**

The climate of Nyansiongo is of highland equatorial type, which enables the place to receive high and reliable rainfall that is well distributed throughout the year. The rainfall distribution depicts two main seasons – the long rain season of March to June and the short rain season of October to December. Nyansiongo receives an average annual rainfall of about 1700- 2000mm. The highest amount of rainfall is received during the month of April while the least is received during the months of January and August. . The figure below shows the Nyansiongo Monthly Rainfall distribution

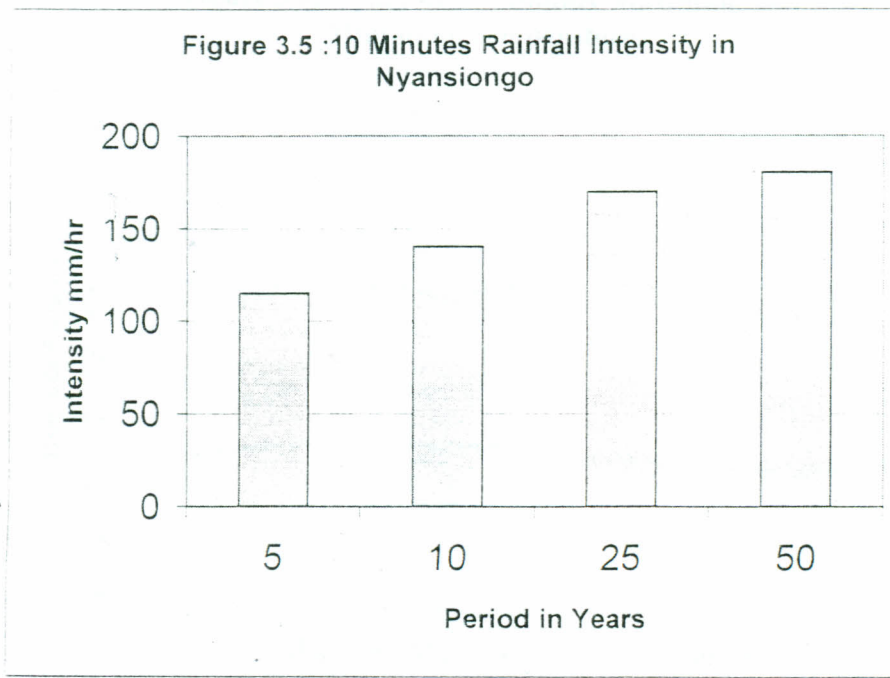
Figure 3.4 :Rainfall Distribution



Source: Kenya Agricultural Research Institute Kisii station –April 2002

The heavy reliable rains in Nyansiongo do support the intensive agricultural production in the region. The rains also replenish water resources in the Nyansiongo. The heavy rains also do present major development challenges in Nyansiongo town. These challenges includes impassable murram roads and high soil erosion that leads to formation of deep gullies

Nyansiongo also receives heavy storms that are common in the western highlands that drain into the Lake Victoria basin. Rainfall intensify of the storms received in Nyansiongo is shown in Figure 3.5 below.

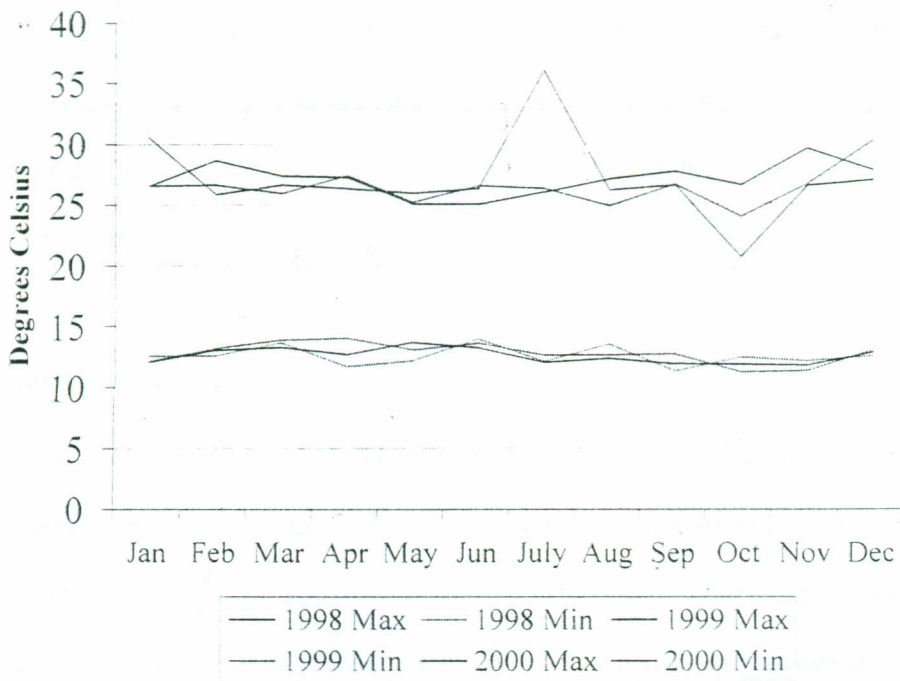


Source: Estimates Derived from Frequency Atlas of Kenya (1978), Ministry of Water Development

### 3.4.2 Temperature

Nyansiongo and its environs are moderately warm, though the nights can be cold and the mean temperature is about  $18^{\circ} - 19^{\circ}\text{C}$ . The average maximum temperature is about  $24^{\circ} - 26^{\circ}\text{C}$  while the minimum temperature is about  $9^{\circ} - 13^{\circ}\text{C}$ . The hot and dry spell spreads over the period December – February and the cold season is over June – July period. These temperature characteristics are very useful for agriculture, which is the major source of income of the surrounding community to Nyansiongo Township and some residents of the township. Figure 3.6 shows Nyansiongo Monthly Maximum and Minimum temperatures for three years (1998,1999,2000).

**Figure 3.6: Nyansiongo Monthly Maximum and Minimum Temperatures**



Source: Kenya Agricultural Research Institute (KARI) Kisii Station-April 2001

### 3.4.3 Wind

Nyansiongo town council and its environs do not experience adverse wind phenomenon though the rainstorm are often accompanied by strong winds. Due to a lot of depletion of the vegetation cover and forest for agricultural purposes, in cases of strong winds, a considerable damage is caused to property e.g. house roofs, trees and crops. The wind generally flows from East to West of the town council's area. The direction of wind flows is important in determining the location of some of the projects such as sewerage treatment plant, solid waste disposal among others.

### 3.5 Vegetation

Much of the natural vegetation cover in Nyansiongo area in general has been depleted. Instead, most of the forest area is now planted with exotic tree species like the cypress, black wattle, and

blue gum. The gum and cypress are the main sources of timber products in the district and the wattle supply firewood and charcoal. In other cases, where the supply is not enough, timber from neighboring Kisii is bought from these places. The depletion of natural vegetation is also because of increased population pressure and intensive human activities like cultivation, livestock keeping and construction. This has led to serious soil erosion because of the high rainfall steep and hilly ground slope.

### **3.6 Land tenure:**

Nyansiongo town covers an estimated area of about 88.9 km<sup>2</sup> (Republic of Kenya 1999). The land ownership in Nyansiongo is under four tenure systems: leasehold, freehold, government and trust land. The bulk of the land of Nyansiongo is freehold on which agriculture and institutions like schools and churches and health facilities have been allocated. Leasehold land is limited to commercial and industrial property in the town such as Nyansiongo tea factory, and the proposed site for hides and skins industry. The leasehold in Nyansiongo covers 99 years. The government land in Nyansiongo have been allocated to the divisional headquarters and divisional education offices, however some government land has been irregularly allocated to private developers like the town dump site. All the trust land in Nyansiongo is under the local authority jurisdiction. A typical plot size in Nyansiongo is 50x100 feet except for the institutions such as schools and the Kenya tea development authority, which have larger portions of land. The land value in Nyansiongo is high. A plot of 50x100 feet in town costs between Kshs. 70,000 to 100,000 while in the hinterland a swampy land ranges from Kshs. 180,000 to 200,000 per hectare and a good raised land ranges from 250,00 to 350,000 per hectare.

### 3.7 Social Economic Set up

#### 3.7.1. Agricultural Activities

The agricultural activities in Nyansiongo include both cash crops and food crops. The cash crops include tea, coffee and pyrethrum. These crops are grown purely for cash. The food crops include maize, beans, finger millet and bananas. The food crops are used both for household consumption and commercial purposes.

#### 3.7.2 Livestock production activities

The number of livestock in Nyansiongo has dwindled over the past years. This can be attributed to the high population pressure on land. The extension services, which can promote livestock activities, have not been adequate. This, coupled with the policy of cost sharing, has pushed the cost of veterinary services beyond the reach of most farmers. This has tremendously reduced livestock production in Nyansiongo. The type of livestock in Nyansiongo includes: dairy cattle, sheep, goats and poultry. The livestock products include, milk, eggs, hides and skins. The sale of these products supplements some income to the people of Nyansiongo.

#### 3.7.3 Industrial Activities

Nyansiongo has a tea factory, which creates avenues for both forward and backward linkages in the process of industrialization. This has assisted to maintain the relationship between the rural community and Nyansiongo Township.

There are a significant number of *juakali* activities within the town, which have played an important role in the creation of employment opportunities in Nyansiongo. These activities include, *juakali* enterprises such as carpentry, shoe shining, brick making, tailoring, motor vehicle repairing, and charcoal selling. These activities have been growing in recent years, in part due to the national emphasis on its expansion.

There are also natural resource based industries in Nyansiongo. These natural resource based industries include: brick making, timber works and murrum quarries. Brick making is carried out in Nyansiongo town and its hinterland due to the presence of clay soil in the area. Small-scale timber works (manually operated saw mills and pit saws) is obtained from the forests in the area, and sold to the local people and carpenters for construction.

#### **3.7.4 Commerce Trade and Services**

There are both formal and informal commercial activities in Nyansiongo. Formal commercial activities include: retail and wholesale trade both for farm produce and industrial products. The farm products include bananas, maize, cabbages, beans, passion fruits and pineapples. The location of Nyansiongo town along Kisii-Nakuru-Nairobi road provides the town with advantage for marketing its agricultural produce. Also since the road is tarmacked, perishable goods are easily transported to their destination. However, there is a lot of transportation difficulties from the hinterland to the tarmacked road because all the roads connecting the Kisii-Nakuru-Nairobi are seasonal. The industrial products sold in the town are most notably produced by East African Industries.

#### **3.7.5 Constraints:**

Major constraints to development in Nyansiongo include, inadequate infrastructural facility such as (water supplies, roads and telephones) underdevelopment of human resources and poor marketing system. The following is an explanation how this constraints impede development in Nyansiongo:

Though the road network in Nyansiongo is well distributed, poor road maintenance has rendered many sections of the roads impassable, particularly during rainy season. The most affected roads

are the rural access roads, tea roads and the major road linking Nyamira, which is the district headquarter. Due to their perishability, milk and tea, which are the key industrial raw materials in Nyansiongo, are the hardest hit by the resultant delay to reach the markets and processing factories.

Nyansiongo Township telephone services are insufficient and unreliable. This situation hampers efficient communication, which is an important component of modern business transactions. The situation negates the enabling environment to attract investors in the town.

Under developed human resource is another constraint facing Nyansiongo Township. Lack of good schools and poverty among the rural population in Nyansiongo area is a hindrance to accessibility of educational opportunities. Inadequate training opportunities have hindered the development of appropriate technical skills among the labour force required in small-scale industrial sector such as *Juakali* and the government offices like the local authority. The poorly staffed and ill-equipped existing youth polytechnics have made the situation worse.

The provision of basic social infrastructure such as sanitary blocks, maternity wings, staff houses, water supply and sewerage facilities are inadequate if not lacking to meet the increasing demand of Nyansiongo township. This has adversely affected the social welfare of the population, in terms of environmental health due to poor disposal of both solid and liquid wastes from the factory and urban dwellings. The few available infrastructure facilities are poorly maintained and therefore cannot operate efficiently as expected. Poor health reduces the productivity of the labour forces and diverts funds that can be invested to payment of medical bills.

Inadequate and poorly developed local raw materials for industrialization are other challenges in Nyansiongo. In agricultural sector, the poor agricultural husbandry practiced by many farmers, particularly small holders have resulted in poor yields and low quality of the agricultural

products. This has mostly affected crops such as coffee, passion fruit, pineapples and other horticultural crops. These crops can be developed into industrial raw materials of good quality to support agro-based industries and with good packages of incentives: there exists room for expansion of the hectareage of these crops. The prevailing practice of land subdivision into small uneconomic units is a serious constraint to promotion of modern agricultural practices, which require larger units. The high cost of inputs has also tended to be a prohibitive factor to modern agricultural practices by small-scale farmers.

In the livestock sector, the number of livestock in Nyansiongo has reduced over time while consumption has increased at an alarming rate due to rural urban migration, which calls for intervention. The town relies on meat products from out side the division. The available grade animals are so highly priced that many farmers cannot afford them. Consequently, majority of the people have resorted to keeping the low quality local breeds. This has caused shortage in supply of milk, hides and skins, which are essential for industrial materials.

## CHAPTER FOUR

### 4.0 RESEARCH DESIGN AND METHODOLOGY

#### 4.1 Research Design.

The study was a case study. This is so because it dealt in detail and thoroughly investigated the problems of planning and management of Nyansiongo Township. Case studies organize data and look at the objects to be studied as a whole and therefore consider all aspects to be studied. This is so because case studies only deal with a few cases unlike the survey research, which deal with a collection of cases thus making it difficult to have a thorough and detailed study (Kathuri and Pal 1993). The research employed the following methods:

#### 4.2 Sampling and Sample Description

The basic unit for sampling interviews and analysis was the households because they are the constant users of the town facilities. The household also understands the planning and management problems facing them.

The peri-urban population was also studied because they use the town facilities and they include the small business dealers such as the grocery dealers and any other users of the town from the surrounding.

Stratified sampling was used to distinguish between urban and the rural population by categorizing them into either urban or rural. Town residents were distinguished from the surrounding community residents. The major aim of doing this as Selltiz, C., Draughtsman, S.L., and Cook, S.W. 1976 note was stratification contributes to the efficiency of sampling as it

succeeds in establishing classes that are comparatively homogenous with characteristics being studied.

Random systematic sampling was used in sampling the town population. Starting from the first household, at least a household head was interviewed from every 5<sup>th</sup> plot. In case the researcher missed the first household head he will move to the next household. Quota sampling was used to organize focused group discussion from the rural and business communities. In this type of sampling, the proportion of various subgroups in the population is determined and then the sample is drawn. This involved the identification of the population for inclusion in the focused group discussions. Two focused group discussions were used to get information from the business and the rural communities. A sample of 86 households was taken. As Kathuri and Pal (1993) note case studies require small 'n' with more depth (pp33). The researcher also did not have funds that would accommodate large sample size. The time available was not enough to allow for a large sample size.

Purposive sampling was also used to acquire the required information from the relevant institutions. Heads of various relevant institutions within the township like the Kenya tea development authority, the Kenya cereal and produce board (K.C.P.B), the divisional headquarters' offices and schools were interviewed. As Mugenda and Mugenda (1999) notes: purposeful sampling allows the researcher to use cases that have information with respect to the objectives of his study.

Snowball sampling was also used to identify the people who hold the relevant information in the study area. After identification of one respondent, the researcher made on other many entries on

the relevant resource persons by allowing the first interviewed person to act as lead person to others with relevant information.

### **4.3 Types and Sources of Data**

Data was obtained from both primary and secondary sources. Primary data was got through administration of questionnaires, interviews schedules, direct observation, use of observation schedule, and through focused group discussions.

The questionnaires were used to acquire information from the households on information related to urban land uses and urban service delivery. The researcher interviewed the households and filled the questionnaires. The reason of face-to-face contact interviewing was to establish rapport to explain the purpose of the study to the respondents by motivating them to seek and give answers, which were genuine to the study. The researcher used both open ended and closed questionnaires. The closed ended questionnaires are good as Mugenda and Mugenda (1999) notes since the information got from them is easy to analyze, because they are in an immediate usable form, they are easy to administer because each item is followed by alternative answers and they are economical to use in terms of time and money. The open-ended questions were used in areas requiring the opinions of the respondents. Mugenda and Mugenda (1999) notes that open-ended questionnaires permit greater depth of the response, are simpler to formulate, and gives an insight into the respondents feeling.

The interview schedule was used for relevant institutions participating in the planning and the management of the town. Unstructured / open-ended interview schedules were used to get relevant information to the researcher. Resource persons such as the factory manager, Head

teachers, town clerk, treasurer, district officer, education officer and the settlement officer were interviewed. Unstructured interview schedules are very good in probing if one wants to get deeper information because of their open nature (Mugenda and Mugenda 1999). They continue to note that interview schedules gives in-depth view which is not possible to get by use of questionnaire, they allow the researcher to get specific information and they allow the researcher to clarify the questions thereby helping the respondents to give the relevant response.

Direct observation was used to get supplement information that would not be got through participating with the groups. This included observing the scenes that were causing planning problems and then trying to identify the relevant driving factors behind what was happening.

Observation schedule was used to identify the facilities and utilities which exist and which don't exist in the township.

The focused group discussions were used to interview the town residents to give the planning and management problems within the township and were requested to give suggestions and solutions to the problems.

The secondary data was got from the review of the exiting literature and other written materials such as development plans, magazines physical development plans, and reports, government publications, theses and dissertations, papers presented at conferences, scholarly journals and relevant publications.

#### 4.4 Methods of Data Analysis

Descriptive statistics was used in the analysis of the data collected. SPSS was used to calculate the percentages. Excel was used to draw histograms and pie charts. Tables, graphs, histograms and pie charts were used to present the data collected.

Content analysis was used to analyze results from the FGDs, (Focused Group Discussions) interviews from the various heads of institutions like the factory, KCPB and the documents obtained from the study area. The data generated was classified to facilitate the search for patterns and themes within the discussions and across the discussions as recommended by (Palton, 1990). Spearman's correlation coefficient and Chi-Square were used to show relationships. The spearman's correlation coefficient was used to show relationships between educational levels and age, age and income, movement and education. The chi-square was used to show the differences between private and government hospitals and tenants and individuals who own the houses.

## CHAPTER FIVE

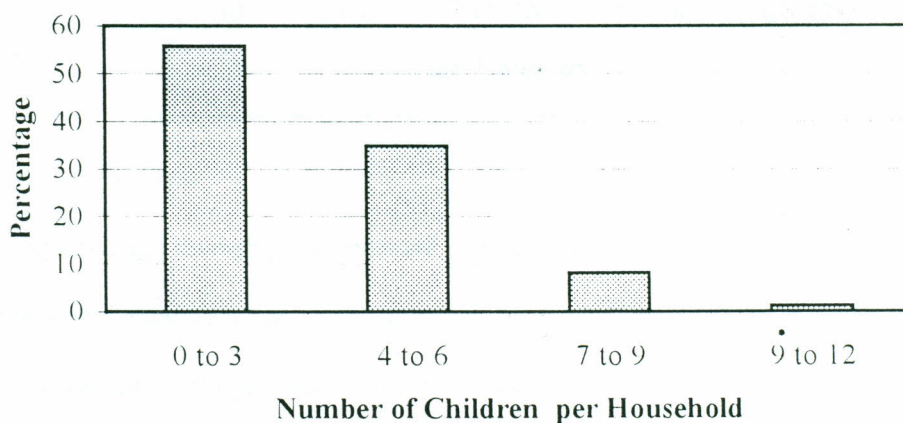
### 5.0 URBAN LAND USES AND SERVICE DELIVERY

This chapter examines the land uses and urban service delivery of Nyansiongo Township. It handles the research premise that Nyansiongo Township is faced with a number of land uses and urban service delivery problems.

#### 5.1 Household Characteristics.

Nyansiongo township household residents are characterized by majority of the people having families of 0 to 3 children, which constitutes 55.8%. Households with 4 to 6 children were found to be 34.9% while those households with 7 to 9 children were found to be 8.1% and those with 9 to 12 were 1.3%. These household children sizes trend indicate negative growth of family sizes. Majority of the respondents argued that they want small family sizes, which they can manage and provide with the basic needs due to the current economic hardship. The Republic of Kenya 1997, which, indicates that in 1991 the Fertility rate had reduced from 7.9% to 5.4%, indicates the same.

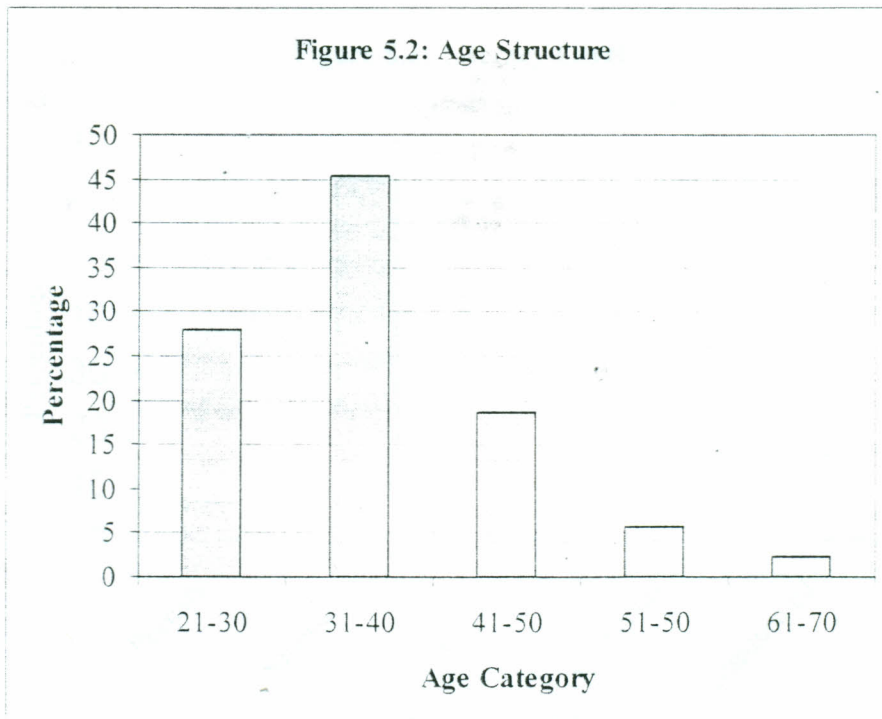
**Figure 5.1: Family Size**



Source: Field Data

The study identified the male to be the dominant household heads who were 93.0% and 7% of the household were found to have female as their heads. The household heads age structure in Nyansiongo was found to range from 23 years to 45 years with the highest age cohort being 31-40 years and the least being 61-70 years. The factors attributed towards age 31-40 being high in the town include, movement from rural to urban areas to look for jobs to enhance their livelihood and larger urban incomes compared to those of the rural areas. Those who had 61-70 years old were found to be few due to the fact that majority of them have retired and gone back home.

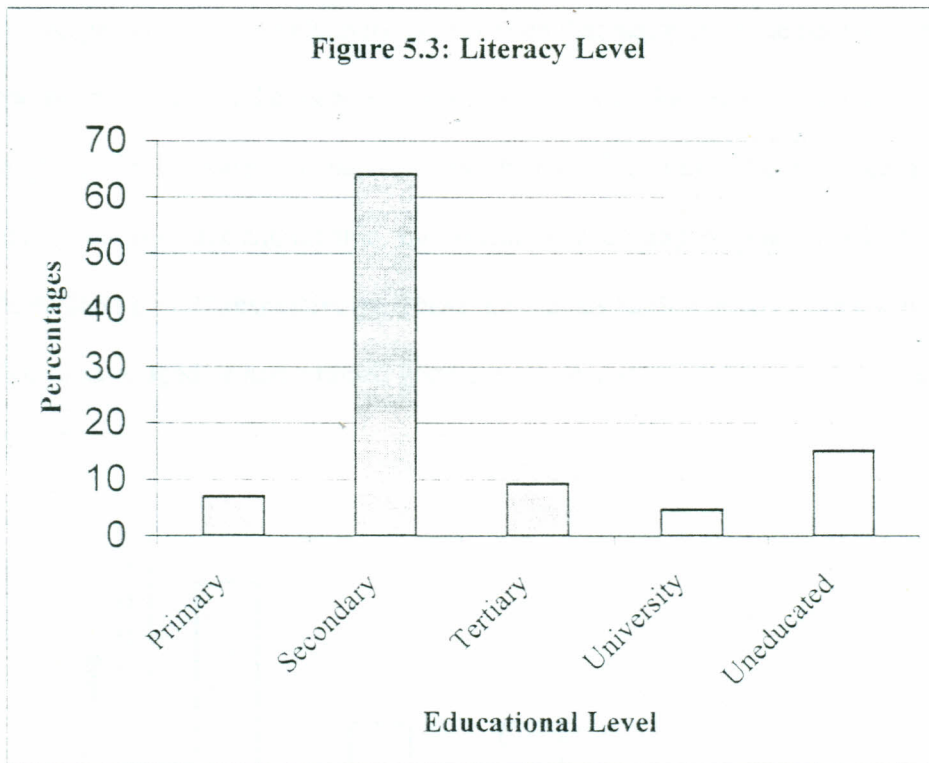
Figure 5.2 below shows Nyansiongo Age Structure.



Source: Field Data

Majority of Nyansiongo township residents are literate. The study revealed that about 64% of the sampled household members have attained form four certificate. Those who have attained University and Tertiary College Education were found to be about 4.7% and 9.3% respectively. The study also identified that some 15% of the population were not educated. From the study

one can conclude that 85% of the residents of Nyansiongo are literate though the university graduates were identified to be few. The study agrees with the government of Kenya (1999), which found out that there are 1,724 University Graduates, 41,420 form four drop outs and 55,051 standard eight dropouts in Nyamira district in which Nyansiongo is found. The study found a significant relationship between education level and age ( $\rho = 0.3454$ ;  $p < 0.001$ ). This implies that as one advances in age he/she is bound to gain more education. This is shown in figure 5.3



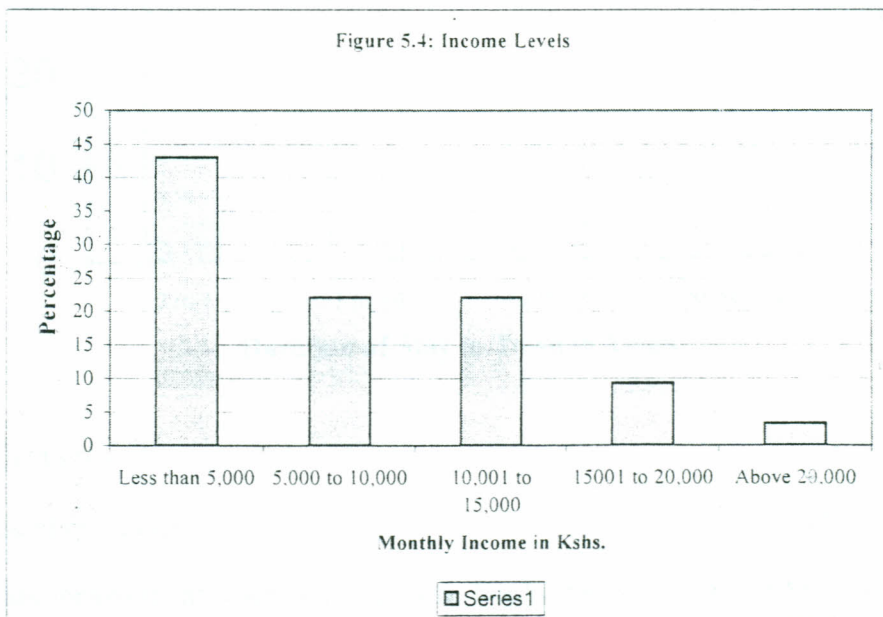
Source: Field Data

The major occupation of Nyansiongo residents is business, which constitutes about 58.1% of the sampled population. Employment constitutes 31.4% while farming and those not occupied present 8.1% and 1.2% respectively. The study revealed that majority of the people have come

to do business due to the fact that job opportunities are limited within the township as employing agencies are very few.

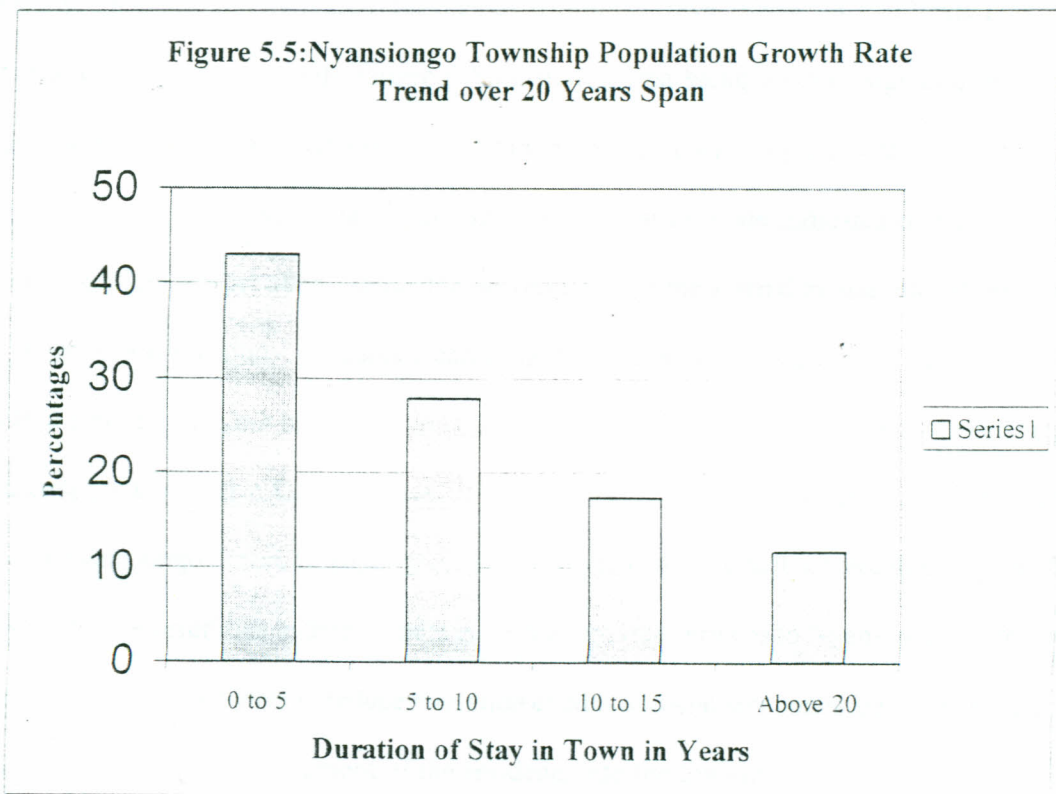
## 5.2 Income levels

The monthly incomes of Nyansiongo township residents were found to be varying. Those with income levels less than Kshs. 5, 000 were found to be the highest about 43% followed by those with Kshs.5, 001 –10,000 and kshs.10, 001-15,000 each with 22.1 % respectively. Those with incomes of Kshs.15, 001-20,000 and those with Kshs.20, 000 and above were found to be 9.3 % and 3.5% respectively. The study therefore revealed that majority of the people in Nyansiongo earn low incomes and that the income levels increased with the decrease of individuals in each income groups as indicated in the bar graph below. The study also revealed a significant relationship between age and income, and education levels and income ( $\rho=0.03347$   $p<0.002$  and  $Rho=0.2684$   $p>0.01$  respectively). Those individuals having relatively good incomes were identified to have aged or had attained good education and were doing white-collar jobs.



Source: Field Data

Nyansiongo population growth rate is more tremendous than the services provision rate (2.76% per annum) Nyamira District Development Plan 1997-2001. Most of the township residents were found to be recent migrants to the town within a period of 0 to 5 years who constitutes 43% of the interviewed respondents. The trend of the migration to the town kept on decreasing as the number of years of stay of the residents in town increased. This is a clear indication that the town is not static in terms of population growth rate. The Figure 5.5 below indicates the town's population growth trend over 20 years period span.

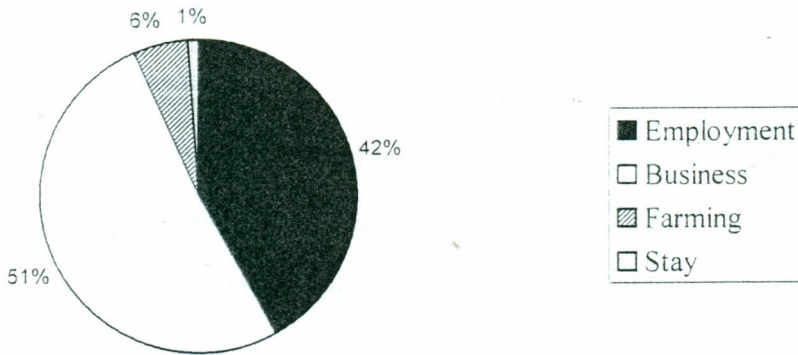


Source: Field Data

On the case of the reason of movement into the town, 51.2% of the people interviewed indicated that they had moved to the town to do business. The business activities in Nyansiongo are both formal and informal. The formal business activities include; retail and whole sale both for farm

produce and industrial products. The farm products include: bananas maize cabbage, beans, passion fruits and pineapples. The informal activities that provide income opportunities to some residents of Nyansiongo include; brick making, tailoring, motor vehicle repairing and charcoal selling. About 41.9% of the residents said that they had moved to the town for employment reasons. The major employing agencies within the township are private and government institutions. The government institutions include, Nyansiongo tea factory, Kenya national cereal and produce board, and secondary schools like Menyanya high school, Nyansiongo high school and Nyansiongo town council. The private institutions include the private schools, private hospitals, chemists, and individual businesses within the town. Only 5.8% indicated that they had migrated to the town to do farming. Nyansiongo area being a white highland settlement scheme still has some large parcels of land than the rest of Kisii. Only 1.2 percent was found to have come to stay in town. The spearman rank correlation done indicates that there was a negative relationship between reason for movement into the township and education ( $\rho = -0.2348$ ,  $p < 0.030$ ) the study indicates clearly that though the town is growing, majority of the educated people have not been attracted to it. Majority of the people are moving to secondary and metropolitan towns in Kenya to look for better job opportunities and services, which are not found in Nyansiongo. There is reason therefore to develop these small urban centers by creating employment opportunities in them. There is need to provide services to Nyansiongo, as this will attract these educated people to reduce migration exodus to secondary and large cities. Figure 5.6 indicates the reasons for movement of the residents into the township.

**Figure 5.6: Reasons for Movement**



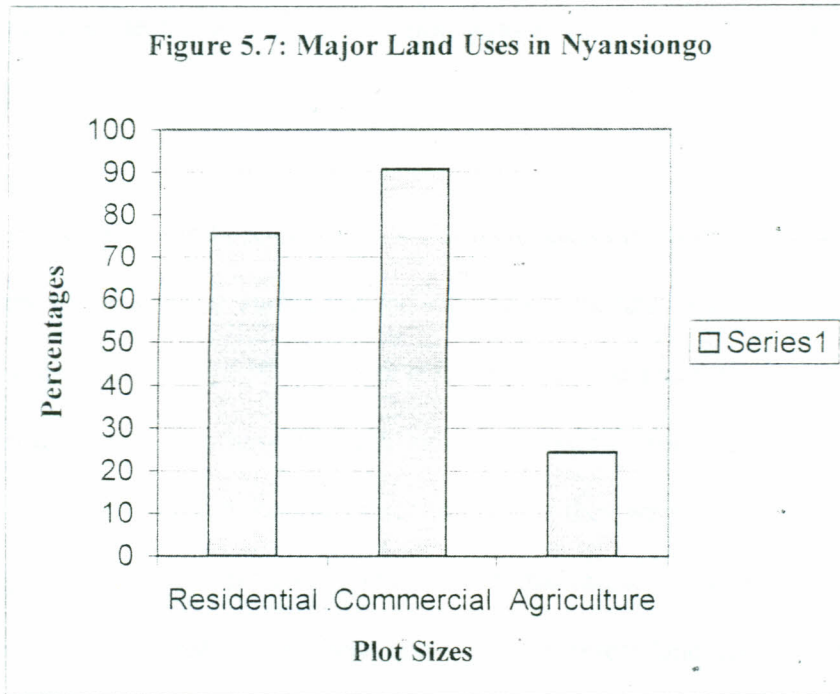
Source: Field Data

### 5.3 Land use problems.

The present land tenure arrangement in Nyansiongo is broadly categorized into four distinct types of ownership- freehold, leasehold, government land and trust. These different types of land tenure have different implication in the planning and the management of Nyansiongo Township. Traditionally government land was more suitable for urban development as provisions were made to plan and service it (Government of Kenya, UNCHS and the Belgian Development Cooperation 1999). In Nyansiongo there hardly exists any government land. Most of it has already been committed to various government purposes. This means that compulsory acquisition and voluntary sale/purchase presents the only option for future development of public purposes and utilities in Nyansiongo. The bulk of land in Nyansiongo is freehold. Freehold land presents numerous planning and management problems like disorganized building and development control problems such as building on very poorly planned pieces of land since freehold land is never planned and serviced. In Nyansiongo houses are built next to the water source, which is a health hazard.

Land acquisition in Nyansiongo is through three major ways; buying, inheritance and government allocation. This presented 86%, 11.6% and 2.3% respectively of the interviewed respondents. Land being a scarce commodity, and the growth of the town being tremendous (2.76%) (Nyamira District Development Plan, 2001), and since most of the land is acquired through buying, indicates that the development of Nyansiongo might be inhibited in the near future. Land for sale is already limited and the cost per plot is already prohibitive. In Nyansiongo a plot of 50x100 feet goes for Kshs. 100, 000 leave alone development capital for the plot. Due to this scarcity of land, the growth rate of the town might be slowed down, as the low-income groups will be forced to move to occupy illegal unserviced subdivision often at the periphery of the town because they cannot afford land within the town center. This type of settlement will lead to even more negative impacts on air quality, poor urban service delivery of basic services like roads, water supply, education supply, shelter supply, waste management and finally incompatible land uses.

The plot sizes in Nyansiongo range from less than  $\frac{1}{4}$  an acre,  $\frac{1}{2}$  an acre, to above one acre. This constitutes 43, 45% and 11.0% respectively of the respondents. These plot sizes are small for future expansion. The major land uses in Nyansiongo are commercial, residential and agricultural as indicated in figure 5.7.



Source: Field Data

National economies are becoming increasingly urban. From the study, it came out clearly that in Nyansiongo the major land use is commercial which was found to be 90.7%. This is a clear indicator of the importance of towns in national economies. Dillinger (1994) notes that in 1990, more than 80% of the GDP of the low and middle-income countries was produced in non-agricultural sectors-largely in manufacturing and services this argument concurs with the findings from Nyansiongo. Agricultural sector 24.4% has been exceeded by residential 75.6% and commercial 90.7% respectively. Although agriculture is the major occupation of the surrounding community it has not exceeded commercial within the township. This is a clear indicator that in the near future commerce will be the major occupation in the township. This will be very helpful to the surrounding community as it will tap the ready market for their produce to the commercial residents and employees of various institutions thus enhancing the rural urban linkages. The major problems however associated with the commercial and the residential expansion of Nyansiongo is that most of the fertile agricultural land has been taken by

commercial and residential activities. The implication of this is that food production is going to be affected.

Urbanization and urban land use decisions are critical determinants of urban planning. Where urban centers are growing at unprecedented rates, distorted land uses and ineffective urban management result (Bernstein, 1994). These practices lead to degradation of scarce resources. In Nyansiongo, these practices have resulted into incompatible land uses. Of the interviewed respondents, 98.8 % indicated that the major constraints they were facing were incompatible land uses ( $\chi^2=166.0698, df=2, p=0.000$ ). They argued that much of the land uses, which were planned, are either not there or have been taken up by different land uses leading to land use incompatibility. Majority of the houses for example in the section called Kijauri -Roche have been built next to the riverbank hardly 5 metres from. This is too close to the water sources.

Moreover, toilets have been built next to the riverbank and water supply springs. This has resulted into health hazards like infection of diseases such as diarrhorrea and worms as indicated in figure 5.8. Loss of open spaces, dumpsites, sewerage treatment site, social and welfare center, deferred /undetermined land, sports ground and the proposed site for hides and skins have been taken by other land uses. Most of the land has been grabbed and assigned unplanned land uses. Squeezing of unplanned land uses has also been a contributing factor to incompatible land uses. The institutional structure to counter unplanned land uses is also weak. This has resulted in unorganized land uses, which has lead to incompatible land uses. Table 5:1 below indicates some of the land uses that have been take by other land uses in Nyansiongo township.

Table 5.1. Incompatible land uses

Original proposed land use	Currently occupying land use.
Social welfare center	Menyenya high school
Sports ground	Kenya national cereals and produce board
Petrol station/special purpose	Church
Post office	Private developer
Hides and skins industry	Shops
Industrial land	Shops
Drainage reserve	Nyansiongo town council offices
Open space	Private developer
Undetermined/deferred	Private developer
Refuse collection	Private developer
Holding ground	Private developer
Cemetery	Private developer
Slaughterhouse	Private developer

Source: Field Data

## 5.4 Urban service delivery

### 5.4.1 Water supply

Nyansiongo township does not have serious water crisis. 84.4% of the respondents interviewed on the reliability of water supply indicated that though they don't have piped water within the township except in the Kenya Tea Development Authority (K.T.D.A), water is not a problem because it is very near to them. although 88.4 % of the respondent lamented that the water quality is very poor. The major contributing factors of the water quality problem are; unprotected springs, toilets are next to the water sources and poor drainage systems thus during the time of heavy rainfall the springs are filled with storm water. The study also found that the people rely on roof water catchments, which they indicated as being comparatively fair in quality than the river water. This was indicated by about 94.2% of the interviewed respondents. Though 94.2%

indicated that water from the roof catchments is good compared to river waters. 94.2 indicated that they lack adequate storage facilities. Borehole water, well water and piped water were found not significant as indicated in table 5.2 below.

**Table 5.2 Water Supply Problems.**

Missing cases	Water sources	Reliability (%)	Not reliable (%)	Poor quality (%)	Good Quality (%)
80	Piped water	7	0	0	7%
86	Borehole water	0	0	0	0
84	Well water	2.3	0	2.3	0
4	River water	84.9	10.5	88.4	6
0	Roof catchment	0	94.2	5.8	94.2

Source. Field Data.

#### 5.4.2 Energy supply

The four types of energy used in Nyansiongo are charcoal, paraffin, firewood and electricity. Charcoal and paraffin are the most commonly used types of energy. The study found out that high cost is a major problem in the use of the various types of energy. About 95.3% of the interviewed respondents indicated that the cost of charcoal was already too high. A sack of charcoal went for Kshs.300. 91.9% indicated that the cost of paraffin was high at Kshs. 40 per litre, while 60% and 37.5% of the respondents indicated the cost of electricity and firewood were too high respectively. Very few people however about 10.4% and 10.7% were found to use electricity and fire wood respectively. This indicates that though there is electricity and firewood their use is not abundant. The respondents indicated though they want to use electricity tabbing it is costly and the bureaucracies involved in getting it are very challenging and discouraging. The

reason for few people using firewood was found out to be the fact that most of the residents are tenants and the landlords won't allow them to use firewood, as it will smoke the iron sheets. Inadequate supply and long distance were also identified as problems of energy use. About 86% of those respondents who use charcoal indicated that charcoal supply is inadequate due to the fact that it is brought from very far distances, as far as Rift valley province. Electricity supply was also indicated as being inadequate this was indicated by 60% of the respondents.

Unreliable supply was identified as another problem of energy use. Firewood, electricity and charcoal use were identified as being not reliable and this constituted 37.5, 60% and 87.2 % respectively.

Of the sources of energy used in Nyansiongo Township. Charcoal and firewood were identified to have the highest pollution problems. 87.2 % and 87.5% of the respondents indicated this respectively. Biogas and solar potentials have not been exploited. Table 5.3 below shows the charcoal supply problems.

**Table 5.3 Energy Supply**

Type of energy	No of respondents	High cost	Inadequate supply	Long distance	Pollution	Unreliable supply
Charcoal	86	95.3%	86%	98.8%	87.2%	87.2%
Paraffin	85	91.9%	2.3%	1.2%	25.6%	2.3%
Electricity	10	60%	60%	11.6%	-	60%
Firewood	15	37.5%	37.5%	56.3%	87.5%	37.5%

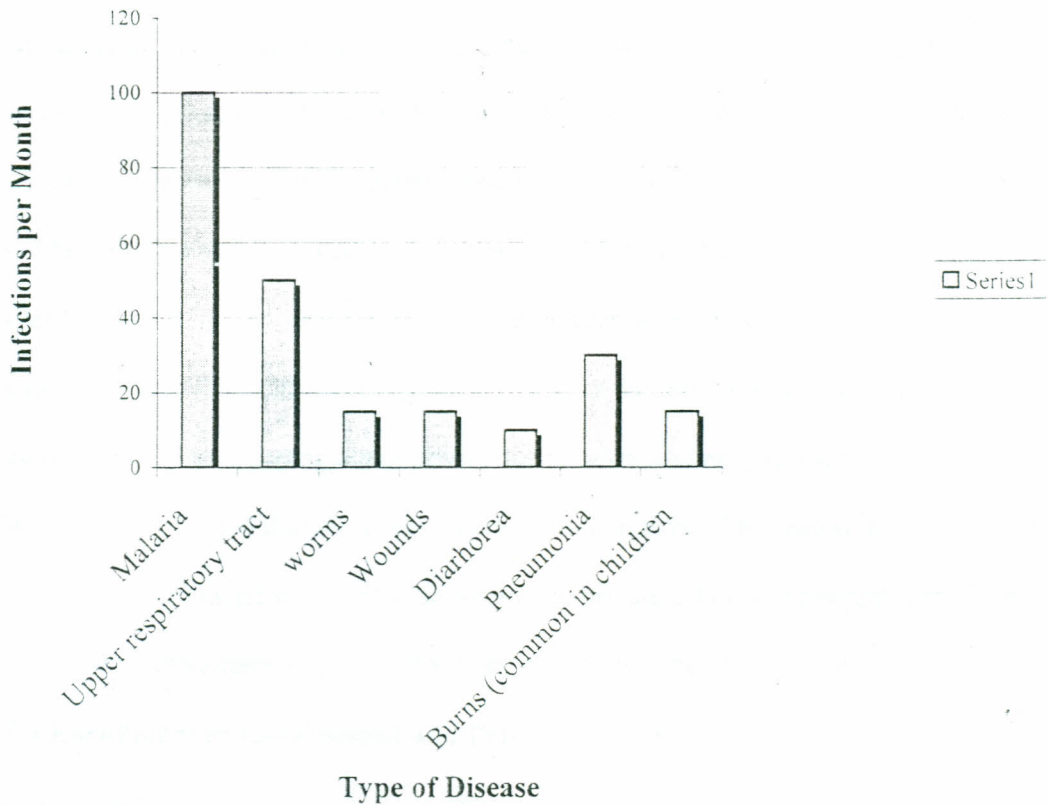
Source: Field Data

### 5.4.3 Health services delivery

Health services in urban centers of developing countries are disturbing. In low-income countries fewer than half of the people can access health services (World Bank, 1990a). Nyansiongo is no

exception. The study revealed that 95.3% couldn't afford health services, while 84.9% of the interviewed respondents indicated that health services within the town are of poor quality. There is one government health centre, one private hospital, and two clinics and three chemists within Nyansiongo Township. Though majority of the people indicated that the private hospitals provide better health services the study found out that the difference between the government hospitals and private hospitals was very significant ( $\chi^2=15.0698, df=1, p=0.001$ ). Only 25 out of 61 were found attending private hospitals. The major contributing factor for this significant relationship was the high health costs in private hospitals compared to government hospitals. The inability to access even basic health services eventually leads to some economic implications to the people. It also leads to premature deaths from disease, which would otherwise be treated. Majority of the people interviewed indicated that the major set back occur when they stop working because of lack of treatment of even minor treatments. Another problem they identified was irregular medical provision of essential drugs to the dispensary by the Ministry of Health. People get prescriptions from the Health Centre and they are forced to buy the drugs in the chemists. Malaria cases were identified to be many followed by respiratory tract infection and pneumonia this is associated with the weather pattern of the township. The township experiences seasonal cold weather during the month of March, April, May and June as indicated in figure 5.8. Diarrhoea and worms were evident and the clinical officer at Nyansiongo attributed this to poor water quality and eating of bad food. The burns were mostly from the children due to carelessness and the wounds were mainly from cuts. The histogram below shows the disease cases in Nyansiongo dispensary per month. This finding concurs with the Nyamira District Development Plan (1997), which indicates that the major disease that affects the majority of the population in Nyansiongo Township is malaria 46%. Diarrhoea diseases account for 27% and intestinal 16.7%

Figure 5.8: Disease Cases



Source: Nyansiongo dispensary

#### 5.4.4 Education services

The major supplier of education in Nyansiongo is the government. Majority of the respondents indicated that they have enrolled their children in government schools (83.7%). Only 16.35% indicated that their children are in private schools. The cost of educating the children was identified to be high. This was indicated by 97.7% of the respondents. The quality of education was also identified to be poor. The respondents indicated that the major contributing factors for the poor quality of education include; poor relation between the teachers and the parents.

inadequate reading materials and study support equipments and apparatus like manila papers for making charts for illustrations and drawing instruments. About 68.6% of the respondents reported that majority of their children do not do well in final examinations and that only a few join institutions of higher learning. However, the respondents indicated that of late, with the introduction of private schools those who can afford to take their children to private schools, are more likely to do their examinations better than the those who take their children in government schools. The enrollment levels were found to be high for boys than in girls in the government schools as indicated in the table 5.4. The respondents indicated that the major reason contributing to this low enrollment for girls than boys is that girls mature faster than boys and therefore are exposed to dropping out of school due to unwanted pregnancies. The enrolment in the private school indicated that there were more Girls than Boys. The reason identified for this disparity was the fact that parents prefer taking girls to private schools to prevent them from too much exposure to unwanted pregnancies as they ensure that they are boarders.

**Table 5.4 Enrollment in Government and Private Schools**

	M.A		Std 1		Std 2		Std 3		Std 4		Std 5		Std 6		Std 7		Std 8		G/T	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
G.S	12	10	33	35	40	38	30	28	38	35	35	40	26	30	27	28	25	26	266	250
P.S	-	-	15	11	15	13	17	13	14	13	7	10	9	7	7	5	-	-	72	84

Source: Nyansiongo Education Divisional Office

Key: M.A-Mentally Handicapped, G.S-government school, P.S-private school.

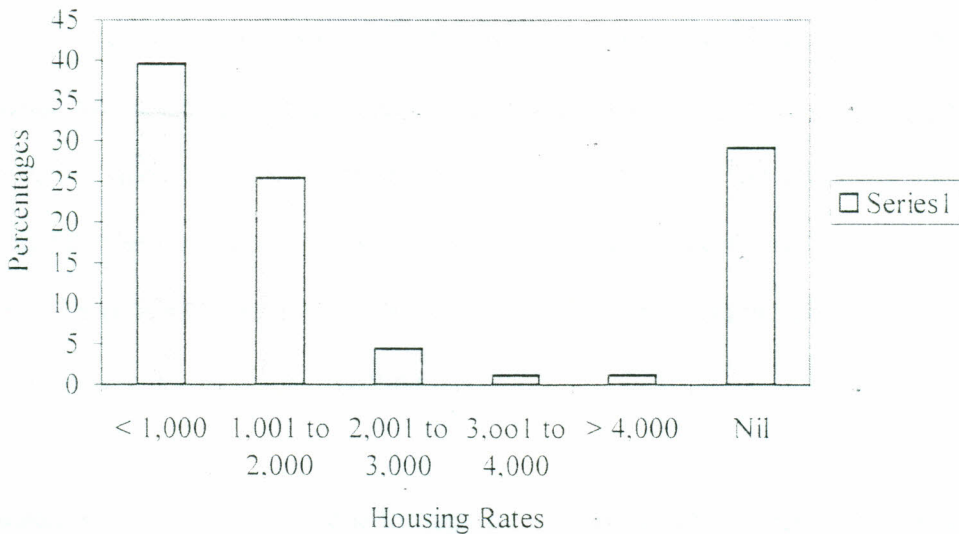
#### 5.4.5 Housing services

The study found out that 77.9% of the respondents of Nyansiongo stay in 2-3 bed- roomed housing units while 22.1% stay in single roomed houses. Most of this people stay with their families. Only 29.1% of the residents own the houses they are living in, the rest 69.9% are

tenants ( $\chi^2=67.1628, df. p=0.000$ ). UNCHS (Habitat)(1990) notes that hundreds of millions of tenants live in third world countries. In china at least 80% of china's 330 million urban dwellers are tenants. (Bedcock.B. 1986, Kojima, 1987), approximately half of india's 150 million urban dwellers are tenants and around one quarter of brazil's 110 million urbanites don't live in their own houses. The contributing factors of high rates of tenancy in Nyansiongo Township were found to be lack or inability to access land by majority of the people, unprecedented population growth rates and lack of finance to construct houses for those who have already attained land. Doebele 1987: 14 notes that access to free land has become much rare for a variety of reasons; First, the combined forces of demographic growth and sub urbanization have simply used up most of the accessible land, pockets of unused or underused land have long since disappeared. Accessible public land has been inundated. Secondly a fully commercialized land market has been established in market cities; people are selling land exorbitantly. Thirdly access to land has been hindered by sheer physical growth of cities and worsened, in places by inadequate development of transportation.

Cost of housing in Nyansiongo is too high. 100 % of the interviewed respondent indicated that Nyansiongo town has the highest rent rate than any other surrounding town. 39.5 % of the respondents indicated that they were paying less than Kshs. 1000 though nobody was identified paying less than Kshs. 300. Those paying between 1,001-2,000 were identified to be 25.4% Those who were not paying rent and had their own houses were 29.1%. The respondents noted that the major contributing factors to this high cost include; very few houses are available compared to tremendous increase of population from the hinterland and employees of various institutions. Lack of finance to purchase construction materials by those who have land was also identified as among the limiting factors in housing provision in Nyansiongo. Figure 5.9 below indicates the housing rent rates of Nyansiongo Township.

**Figure 5.9: Rent Rates In Nyansiongo**



**Source: Field Data**

#### 5.4.6 Waste collection and disposal

The problems concerning solid-waste collection, storage, processing and disposal are related to urban areas. This kind of service absorbs a considerable proportion of municipal or town council's efforts, budgets, and work force. However, the poor quality of services provided in most urban areas in terms of quantity of solid waste collected and environmental protection makes it difficult to justify even the present levels of expenditure in this sector. Therefore, there are increasing demands for improving efficiency. Batone, Bernstein and Wright (1990) notes that in many large cities of developing countries, less than 70% of the municipal solid wastes are collected and only 50% of households are served. In Nyansiongo, 100% of the respondents indicated that the town council does not collect their household waste; instead they have dug rubbish pits at the back of their houses where they dump it, and burn it when pits are full. This finding concurs with UNCHS (habitat) (1987) who found that open dumping accompanied by burning is the most prevalent form of waste disposal in developing countries. The study revealed

that initially, the residents were paying service charges for waste collection though of late they are not paying because a lot of tension existed between the town council and the residents because the council was not providing any waste collection services, and therefore it had to exempt the residents from paying service charges until the services are available. The town council identified lack of equipment as a major constraint for not collecting the waste for the residents. The town council does not have tractors/waste collection vehicles, dustbins, and more worse, there is no dumping site where the collected waste can be taken. There are no private institutions in Nyansiongo collecting solid waste.

Human waste collection is done through pit latrines, which are shared amongst members of various plots. A sewerage treatment plant does not exist in Nyansiongo. The respondents lamented that the major constraint they normally face on human waste disposal is when the pits are full because they have to dig different ones or look for ways of emptying them. They also indicated that since the plots are small they built the whole of it and when the toilets are full they are forced to use crude methods of emptying them by employing personnel who uses bails and buckets to scoop the waste and dump it on the buck street road, which is not in use. The major health risks identified for use of pit latrines for human waste disposal include water related diseases like diarrhorrea and worms as indicated in figure5.8

## CHAPTER SIX

### 6.0 INSTITUTIONAL INFRASTRUCTURE

This chapter examines the institutional infrastructure of Nyansiongo Township. The chapter operates on the premise that the institutional infrastructure of Nyansiongo Township is weak and need to be strengthened.

#### 6.1 Nyansiongo township institutional infrastructure

Nyansiongo township institutional infrastructure is fragmented. The structure has gaps, which makes it weak and almost not operational. The figure 6.1 indicates the expected structure of Nyansiongo Township.

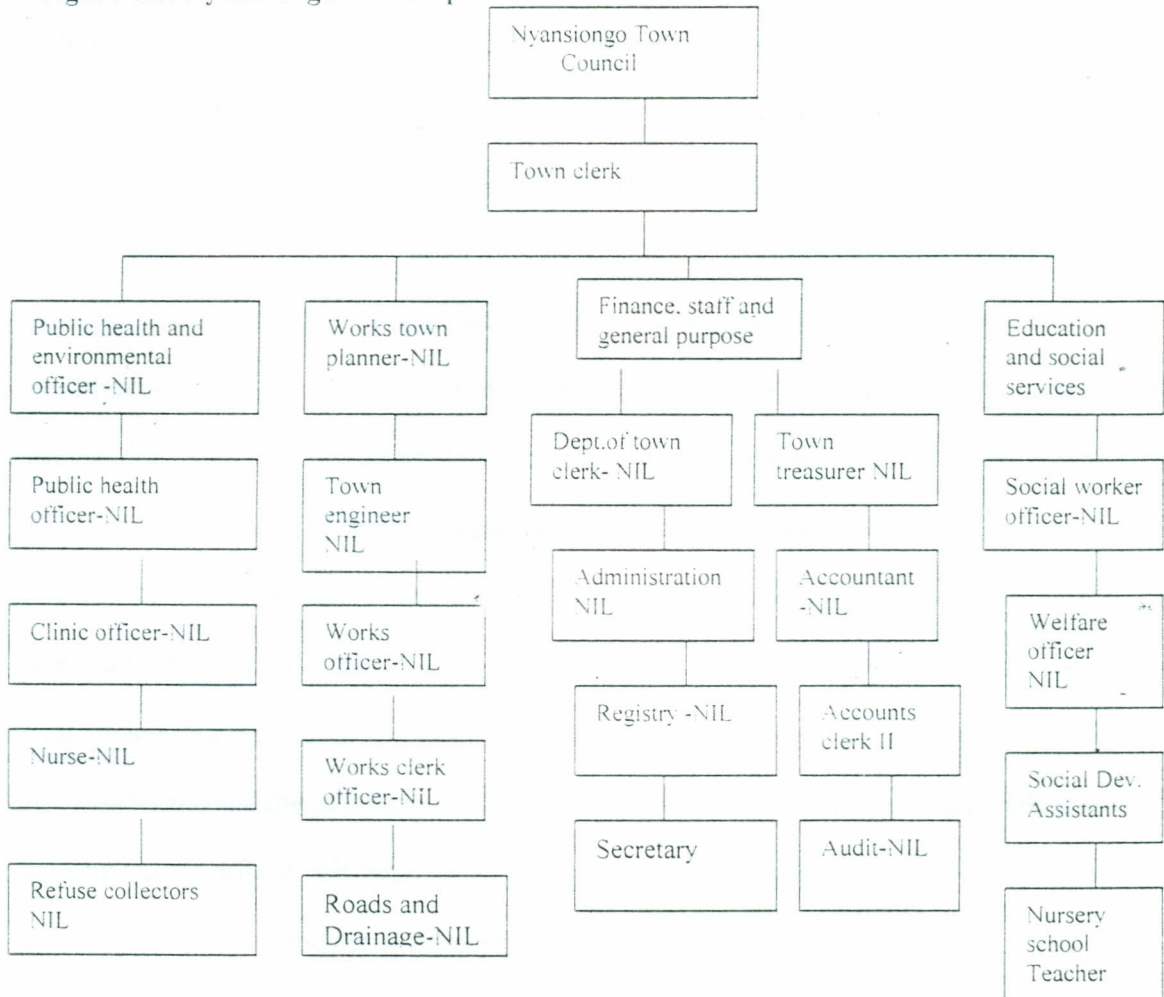
The structure is supposed to have four departments under the town clerk. The departments are: the physical and environmental planning department, the works and town planning department, the finance staff and the general purpose department.

In these four departments, only the finance and the general-purpose department are operational though not in full capacity. This department is divided into two; the department of the town clerk, and the town treasure department. The study identified that these two departments have workers on temporal basis starting from the town clerk who is on acting capacity. The registry section is vacant and instead relies on accounts section for the provision of registry services. The education and social services department has only two social development assistants and the rest of the seats are vacant as indicated in figure 6.1

Owing to inadequacy and lack of technical capacity as indicated in the structure figure 6.1, the town council relies on the central government experts for both technical and decision making on matters affecting the council. The study found out that in matters related to planning such as:

preparation of development plans and short-term development plans the council relied on the Nyamira district-planning officer. The study also found out that the council relied on private consultant firms for report writing, preparation of accounts abstracts and any other services, which requires expertise.

**Figure 6.1. Nyansiongo township structure**



**Source: Nyansiongo Town Council**

These finding concurs with that of the government of Kenya, UNCHS (Habitat) and the Belgian development co-operation (1999) in their attempt to localize agenda 2.1 they found that most local authorities (county, municipal and town councils) do not have technical capacity to play their role effectively due to lack of skilled personnel and elaborate enforcement machinery. As

such, they frequently rely on the office of the director of physical planning for the preparation of physical development plans for their trade and service centers. The implications of dependence on these experts are immense. The town council spends a lot of its revenue on these experts leading to its inability to pay salaries to its workers.

While the council relies on experts from central government and private enterprises, it has formed an alternative structure to temporarily function in the running of the council. The temporal structure's main role in the town is not directed towards planning and management of the town but in revenue collection. This structure is under the clerks department and it is divided into six sections; the market department, the civic department, the treasury department, the works department, the social services department and the enforcement department. Each department has been allocated its roles directed towards revenue collection. The market department is composed of 12 revenue collectors, the civic department has 8 councilors seven elected and one nominated, and the treasury is composed of an accounts clerk, an internal auditor, and chief accountant 1, the works department is in charge of service delivery and is composed of three employees though the council does not provide any services, the social service department is composed of two assistant social workers, and the enforcement department which is concerned with legal matters has one administrative officer. All these officers mainly collect revenue. Table 6.1 summarizes the current operational structure in Nyansiongo.

Table 6.1 Current Operational Structure

Department	Work force	Role
Clerks	The Town clerk, the secretary and the town surveyor	Overall administration
Market	12 revenue collectors	Collection of revenue from the market centers
Civic	8 councilors, 7 elected and one nominated	In charge of various wards enhance their development e.g. development of market centres
Treasury	Accountant internal auditor, and chief officer 1	Receive collected revenue
Social services	2 social assistants	Deals with council social matters
Enforcement	1. administrative officer	Deals with enforcement of matters affecting the council e.g. arresting individuals not ready to pay taxes

Source. Field survey

The qualifications of the town council workers are pathetic and shocking. Most of the workers are not qualified. Lack of qualified staff has led to poor planning of the town, as most of the workers do not understand town-planning principles. Except the town surveyor who is a graduate from Kenya polytechnic, the clerical officer who has KATC I and who is the acting town clerk, accountant III who has KATC I, (Kenya Accountant Technician Certificate) and who is the acting treasurer, one market attendant with KATC I and the secretary to the town clerk who has secretarial qualifications, the rest of the employees are K.J.C.S.E (Kenya Junior Certificate of Secondary Education) holders and form fours leavers K.C.S.E (Kenya Certificate of Secondary

Education) respectively. Table 6.2 below illustrates the qualifications of Nyansiongo town council workers.

**Table 6.2. Qualifications of Nyansiongo Township Workers**

<b>Post/Department</b>	<b>Qualifications</b>
<b>Town Clerk Department</b>	
Town clerk	KATC I
Clerical officer I	Vacant
Clerical officer II	KATC I
Clerical officer III	Division Four
Town surveyor	Diploma in survey
Secretary	Secretarial studies
<b>Enforcement Section</b>	
Assistant inspector enforcement officer	Ex-police
Watchmen	Vacant
<b>Treasury Department</b>	
Treasurer	KATC I
Accountant III	KATC I
Market attendants	Form four/ KJCSE
Revenue clerks	Form four/KJCSE
<b>Social service Department</b>	
Social worker	Form four

**Source: Nyansiongo town council**

To deal with the development problem, the council has formulated the development control section administered by the town clerk in conjunctions with the public health officer. However the study found out that this development control section has not been effective in addressing planning and management problems of Nyansiongo. The study found out that most of the houses are built haphazardly without leaving access roads; most of the houses are built next to the riverbank especially the houses in kijauri Roche section, spaces between one house and another

were found to be small and majority of the people in kijauri Roche were found having their toilets next to the water sources. This is contrary to section 210 of the Local Government act which has clearly provided for the minimum building specifications such as spaces about buildings, building lines and individual plot accesses (UNCHS (Habitat) 1999). The major reasons identified for ineffective development control were:

1. Few or inadequate staff to administer development control.
2. The study found that corruption was one of the impediments of Development control in Nyansiongo Township. In this case the study found out that some developers are cleared for development without putting into considerations the effects of such approval bride.
3. Ignorance was identified as another cause of ineffective development control. Lack of planning knowledge on development control was identified as a contributing factor to ineffective development control. There are no technical experts to advice on development issues
4. The study revealed that political interference led to infective development control. Development projects, which belonged to the powerful politicians were found to be given special considerations, as they will not be touched even when they are wrongly planned.
5. Lack of motivation to control unwanted developments was also expressed as one of the contributing factors. The workers of the council seemed not interested in controlling any development. They argued that the council doesn't recognize their efforts.
6. Weak enforcement rules came out as a factor contributing to ineffective development control. The building codes and sanitary standards guiding construction of houses in Nyansiongo does not exist .The council does not have the necessary enforcement personnel like public health officers and they depend on the public officer from the ministry of health (M.O.H).

Presently the council does not have any community involvement in town planning. The study revealed that the major reason for this is that; first, the council does not provide services and therefore doesn't have any avenue through which they can meet with the community. Secondly, the council does not have it's own experts who should work with the community.

The sources of revenue in Nyansiongo are limited, inadequate and have poor methods of collection. Table 6.3 below summarizes the major sources of revenue in Nyansiongo;

**Table 6.3 Sources of Revenue in Nyansiongo.**

Number	Category of business/sources	Fees for Year 2000 in Kshs.
1	Butchery	2400
2	Grocery shop	1500
3	Carpentry	2400
4	Boutique	3000
5	Salon	1200
6	Kinyozi	1200
7	On bar	2400
8	Bar & restaurant	3000
9	Lodging-bar & restaurant	7500
10	Grocery kiosk	1200
11	Posho mill	2400
12	Hotel	2100
13	Animal feeds	2400
14	Chemist	3000
15	Clinic	3000
16	Nursing home-beds-from11-13	13500
17	Nursing home-beds –up to 10	9000
18	General store	7500
19	Kerosene drum	3000
20	Timber yard	2400

21	Molding	2400
22	Hardware	7500
23	Electricity welding	2400
24	Survey	6000
25	Furniture equipment	7500
26	Tailoring	2400
28	Private primary school-over10 pupils	9000
29	Bookshop	2400
30	Laundry	3000
31	Shoe dealer	3000
32	Veranda tailoring	2400
33	Wholesale	6000
34	Private pri-school-30to 100 pupils	4500
35	Stock trade/medium trade	3000
36	New cloths	3000
37	Bicycle repair	1200
38	Slaughter house	2400
39	Shoe repair verandah	1500
40	Shoe repair premise	2400
41	Sale of recorded compacts	2400
42	Shoe shinning/polishing	1200
43	Battery charging	1500
44	Charcoal stores	3000
45	Puncture repair	2400
46	Herbalist	2400
47	Motor vehicle, bicycle, tractor spare parts	3000
48	Petrol station	6000
49	Milk dealers (fresh)	3000
50	Maize agent (cereal stores)	7500

51	News paper shop	2400
52	Photocopying machine	2400
53	Radio/ television repair	1500
54	Dhobi manual	1500
55	Plot rent	630
56	Physical planning	-
57	Fines	-
58	Market dues	-

**Source: Nyansiongo town council.**

The study revealed that the township relies on fees collection from Tea cess, Pyrethrum cess and Maize cess as indicated in appendix 7. It also relies on market dues, Business licenses, plot rent fees, fines and physical planning as indicated in table 6.3 above. The Local Authority Transfers Funds (LATF) is also provided to small local authorities for development. The businessmen lamented that the license fees charged was high and has indeed affected the business beginners who end up opting to surrender from business or move to other towns where the charges are less or they sometimes find it difficult to pay the fees. Discussions held with some businessmen like those operating lodging-bar and restaurant, maternity private nursing hospitals, general shops, furniture shops and private primary schools revealed that the tax fee rates are too high bearing in mind that they are also paying rent for the business premises.

The methods used in the collection of the revenue include, face-to-face confrontation in the streets since the council does not have an open-air market where traders could sell their produce. Issuance of licenses was done to all the business within the town council. The study revealed that those who don't purchase licenses on time were charged an interest of 5% for every month they delayed. The factors identified as being the major ones contributing to low revenue collection include;

- i. Lack of Bus Park within the township, which has made it difficult for the town council to collect levies from the *Matatu* operators.
- ii. Lack of open-air market where traders can sell their produce and in turn pay the market levies to the council.
- iii. Corruption of the market attendants in the process of collecting the markers dues.
- iv. Some business owners don't want to pay tax they are not pleased with the service provision of the township.
- v. Lack of motivation of the revenue collectors, which has weakened the revenue collection enforcements mechanisms. Even if they collect the money they stay for along time without salaries.
- vi. Lack of equipment like vehicles to assist in movement when collecting the revenue.
- vii. Grabbing of council land which will be otherwise giving rent to the council.
- viii. Dormancy of the council in utilizing its land for example they should develop the open-air market since there is land available for it.
- ix. Few number of business categories therefore the revenue collected is little. The enumeration of the business categories in Nyansiongo is indicated in table 6.4 below.

**Table 6.4 Business Categories in Nyansiongo.**

Business category	Enumeration of each business category:
General trade, wholesale, stores, shops, personal services	243
Transport, storage and communication	22
Professional and technical services	4
Private education, health and entertainment services	35
Industrial plants, factories, workshops, constructions, agricultural, forestry and natural resource extraction	42
Accommodation and catering	42

Source: Nyansiongo Town Council

Owing to the fact that the revenue collected is not adequate, the town council was found to operate on deficit, which has *adversely affected the operation of the town's development* activities due to lack of finance. Appendix 6 and appendix 7 show the deficits for 1999/2000 and 2000/2001. From the appendix it is clear that for these two financial years, the deficit levels have increased four fold from Kshs.207, 426.30 to Kshs.901, 072 respectively. The huge deficits have affected the development of the township seriously. Service provision within the township has been immensely affected due to inadequate of funds. Due to the fact that the funds are not enough misallocation of the funds was identified as a major outcome. Urgent projects were dealt with first.

## **6.2 Other Institutions Involved in Planning and Management of Nyansiongo Township**

### **6.2.1 Local Authority Transfer Fund (LATF)**

The local government provides the local authorities with funds to run its activities within the councils. These funds are not definite for each year but depend on the activities planned for in each year. From the study it came out that the town council provides estimates for the activities it wants to carry out in a given year to the local government, which will then approve the requested amount or give less depending on the availability of the money and Appendix 8 and 9 show the LATF estimates for the year 2001/2002 and 2002/2003. The LATF funds assist Nyansiongo council in doing the following:

- i. Completion of projects- e.g. office and equipment maintenance and any other activities required in the office.
- ii. Payment of debts- e.g. NSSF (National Social Security Funds), PAYE (pay as you earn), National Hospital Insurance Fund (NHIF), salaries and councilors allowances,

- iii. Hiring of personnel- for example operation and maintenance consultations e.g. preparation of local authority development programs, Revenue Enhancement Plans (REP) and accounts abstracts.

The study identified that though LATF is given to the council each year, there are many problems involved. The problems they identified include;

- i. The money giving conditions are difficult; as the council has to meet some requirements for, example, it has to clear debts of previous year e.g. (NIHF).
- ii. Misappropriation of funds on arrival was also identified as a problem of the LATF funds. It came out clearly that the LATF money comes in huge amounts and is allocated to councilors.
- iii. Misallocation of funds on arrival was also identified as a problem. Once the money is brought it is put into unplanned projects.

#### **6.2.2 K.T.D.A (Kenya Tea Development Authority)**

K.T.D.A was found to play a major role in the planning and management of Nyansiongo. It was found out that K.T.D.A is involved in road maintenance within the county council territory by using the cess money. It repairs roads in hilly and impassable areas to facilitate transportation of the tea leaves to the factory, which in the long run benefits the council. However, the K.T.D.A. Company identified some problems it faces in its endeavor to provide the services. These problems include;

- i. Lack of enough equipment and tools for road repair and maintenance.
- ii. Lack of sufficient funds
- iii. Lack of coordination between local authority and K.T.D.A.
- iv. It covers only a few sections, which are in pathetic condition.

### **6.2.3 Ministry of health (M.O.H)**

The ministry of health is also involved in the planning and management of Nyansiongo Township. It is involved in providing personnel like the public health officer to control planning systems, which are detrimental to the town council. The public health officer regulates the sanitary and building codes within the town and advises on environmental problems likely to emerge from poor town planning. The public health officer also regulates waste disposal within the residential areas. He ensures that the food quality within the township is not contaminated and unsafe for human consumption. The major problems encountered by M.H.O in its endeavor to provide services to the town council include;

1. Lack of coordination between M.O.H and Nyansiongo town council,
2. Lack of strict enforcement mechanism due to the fact that the town council does not work with the health officer.
3. Corrupt public health officer who sometimes can overlook some situations, which need attention.

### **6.2.4 Kenya prisons (K.P)**

The Kenya prisons was found to assist the council with prisoners who were assigned some jobs within the council for example clearing the bushes and maintenance of access roads.

## CHAPTER SEVEN

### 7.0 SUMMARY OF THE FINDINGS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

#### 7.1 Summary of the findings

The purpose of the study was to examine the problems of planning and management facing Nyansiongo. The study focused on the examination of the land uses and urban service delivery and institutional infrastructure of Nyansiongo Township.

The study was based on the premise that Nyansiongo has planning and management problems. It was also based on the premise that the land uses and urban service delivery in Nyansiongo are inadequate and poor. Finally it was based on the premise that the institutional infrastructure of Nyansiongo Township is weak and needs to be strengthened.

Nyansiongo is urbanizing at unprecedented rates of 2.76 % per annum (Nyamira District Development plan (1997-2002)). Nyansiongo requires development of services such as health facilities, education, sports facilities, improved energy supply and any other services required to enhance its development. Nyansiongo is the divisional headquarters and therefore requires development to support activities of a divisional headquarter.

The study was carried out in Nyansiongo Township, Borabu division, a small upcoming town in Nyamira District. The findings show a picture of a town with tremendous population growth rate and increased demand of urban service delivery, improved land uses, and need for strengthened institutional infrastructure. The study revealed that commercial land use predominates other land uses. Freehold land tenure was also found to be dominant in Nyansiongo and is expected to cause

more problems in service delivery, as it will be difficult for the council to plan these freehold lands. It came out that land is scarce and individuals are now being tempted to move into the hinterland to search for development land. Urban service delivery in Nyansiongo was identified to be poor since the council does not provide any services. The respondents indicated that the services were costly and of poor quality.

The institutional infrastructure of Nyansiongo is fragmented and inadequate, lacking qualified personnel, lack community involvement, ineffective development control mechanism, has poor enforcement mechanism and poor revenue collection methods. It thus depends on personnel from the district headquarters for its planning and management.

River water and roof catchments were identified as the major water sources for the residents. The residents identified the river water as being of poor quality. Although they indicated that roof catchment is fair in quality storage facility is not enough. The other water potentials have not been exploited. Poor quality water is one of the major contributing factors of water borne diseases. Therefore there is need for improved water supply system in Nyansiongo.

The major types of energy used in Nyansiongo are paraffin and charcoal though they are too expensive for the residents the potential of other sources of energy like biogas, solar have not been exploited. While electricity passes through the township majority of the residents have not been able to tap its potential.

Housing in Nyansiongo is costly and scarce as the population growth rate is rapid and the rate of construction does not tally with this growth.

Health and Educational facilities are of poor quality and expensive to the resident. Majority of the residents take their children in government schools though private schools have relatively fair educational standards as compared to the government schools thus the number of children passing to institutions of higher learning is very few.

Nyansiongo town council doesn't provide any services to residents since it does not have equipment and facilities necessary for service provision.

The sources of revenue in Nyansiongo Township are inadequate. This has led to inadequacy of funds for the town council to effectively carry out its activities. The major contributing factors for few revenue sources are, the council has not expanded its sources of revenue for example it does not have open air markets and bus park. The revenue collection methods are also crude and poor since the revenue collectors chase the people within the streets of the town council this makes the council to lose more revenue as people hide.

### **7.3 Recommendations**

To improve the planning and management of Nyansiongo Township the following proposals need to be implemented.

- i. To solve problems resulting from freehold land ownership, the council in conjunction with the local authority should discourage unplanned settlement by planning them, organizing for plot sub division and adhering strictly to the laid down plans to discourage incompatible land uses by following their regulations and punishing those going against them. To acquire land for specific developments, the council should do the following:

- a). Through the LATF grants and the cess money the council should budget to buy land through voluntary negotiations with private land owners who are willing to sale their land and purchase it. Appendix 6 and 7 indicates the adequacy of the LATF and cess money.
- b). The council should use land expropriation and compensation of private landowners to acquire sites for public facilities and infrastructure this would not be available through negotiated purchase.
- c). The council and the private developers should do bartering and exchange some left sections of land either with the private owners or among government owners to acquire land for facilities which it wishes to develop in some region e.g. sewerage site.
- d). The council should encourage private donors (if there are any), who are willing to donate land as gifts for public services, usually in consideration of tax advantages, lack of development money or lack of heir.
- f). Governments should be advised to purchase land in advance of its need to ensure its availability at affordable prices when need arise.
  - ii. To solve the water problems, the council in conjunction with the community should work together to come up with water projects to tap the water potentials of the region and improve its quality. These projects should include; protecting of the water sources from easy reach of contamination by planning those utilities likely to contaminate the water like the toilets far away from the sources. Appendix 9 outlines construction and protection of the water springs as one of the proposals for LATF award. Since Nyansiongo area has sufficient rainfall the landlords should be encouraged to construct water storage tanks for their tenants. Based on the terrain of Nyansiongo,

which is hilly, water projects, which utilise gravity, should be encouraged to tap water from the top of the hills to supply the town with piped water.

- iii. Since the residents complained that the major types of energy they are using are expensive (charcoal and paraffin), and that charcoal is unreliable and other potentials like biogas, solar and electricity have not been exploited, the community need to be trained on ways of exploiting other potentials like biogas and solar. There is need for the community to come together and look for ways of accessing electricity. To solve the problem of unreliability of charcoal, the community also through the government in conjunction with willing NGOs should be requested to train the community on energy saving techniques to reduce the cost on energy use and at the same time save the environment. The council should request the government to assist in the development of electricity services through rural electrification programme.
- iv. Housing in Nyansiongo is costly and scarce. Therefore there is need to look for ways that can lead to abundant housing supply to reduce both the cost, and supply adequate accommodation to the residents. Since the land is scarce, through planning, the council should encourage flats and story buildings. These will reduce both rent rates and congestion, as it will increase the housing units. The community should be encouraged to formulate self-help housing provision groups to enhance individual house ownership even if it is in story buildings.
- v. There is need to improve the health and educational facilities within the township. In the case of education, the major objective should be to provide universal, quality and cheap education and produce individuals who are properly socialised and possess the necessary skills, attitudes and values that will effectively enable them to participate positively in national building. To achieve this objective, the government of Kenya, the community and the teachers should work together in doing the following:

a). Enhancing and improving the quality of education, at all levels through working together to provide the students with good study materials.

b). Strengthen the teaching levels to enhance good performance by using required study materials and instruments.

For the parents, teachers and government to achieve the above objectives, they should work together in utilising the available resources to provide the necessary equipment, apparatus and textbooks through Harambees. These will enhance and improve the quality of education and strengthen teaching. Bursary funds should be given to the children from poor families to assist them in paying fees

To deal with health problems, the government of Kenya should finance projects, which will lead to the achievement of the long-term goal of the government of providing health facilities within easy reach of all Kenyans. The ministry of health through the government should promote health status through the deliberate restructuring of the health sector and make health services more effective, accessible and affordable. It should also increase coverage and accessibility of health facilities with the active participation of the community. The CBOs (community Based Organizations) like the missionaries should be encouraged to bring cheap health facilities within easy reach of the people. The private sector should also be encouraged to provide affordable health facilities to the residents.

- vi. The council does not have equipment for collecting solid waste. It should encourage the communities and private groups to collect and dispose of the solid waste and the residents should be encouraged to pay for the waste collection services. To necessitate waste disposal, the council should establish the waste disposal sites. Private negotiations with private land owners in areas the council wishes to have the

household waste and the human waste disposed should be done and the council should use the LATF to purchase land for such sites. Land for the development of the sites can also be found through expropriation and compensation of private landowners.

- vii. One of the serious problems facing Nyansiongo town council is the handicap resulting from the fragmented nature of its' institutions, lack of qualified and inadequate personnel, poor enforcement mechanisms and the fragmentation is worsened further by lack of clear legal and regulatory framework to guide the town council. The council should train it's personnel to remove the gaps which are leading to fragmentation by making them to have the basic skills which they require in solving planning and problems of the town. The council should provide financial Aid/support to those employees willing to improve their skills. To solve the problem of unclear framework, the council should streamline the existing legal and regulatory framework. To enhance enforcement, the council should clearly state rules and regulations governing various sectors.
- viii. To cope with the problem of inadequate revenue, the council should do the following:
- a). Expand its revenue base. The council should make a day for an open-air market. It should construct bus bark. It should improve its revenue collection techniques. It should encourage private investors by regulating tax levies to increase business categories, which will in the long run increase the sources of their revenue.
  - b). The council should strengthen the revenue collection enforcement mechanisms by fencing an open Air market since there is already available land for the market. It should also motivate the workers by paying them their salaries to reduce corruption and encourage hard work.

C). The council should purchase a vehicle to assist in the process of revenue collection revenue.

#### **7.4 Suggestion of areas for further research**

The study was only interested in looking at urban land uses and urban service delivery and the institutional infrastructure of the town council. From the study there arose some areas, which require to be researched on to improve the problems facing Nyansiongo Township. These areas are enumerated below.

1. A study to determine the quality of water sources within Nyansiongo Township as relates to physical chemical and bacteriological parameters. The findings will authenticate the respondents' feelings about the water quality.
2. Problems of housing in Nyansiongo, causes and solutions. The findings will be useful in providing solutions of housing problems in Nyansiongo
3. A study to get the actual values, sizes and distribution of land and their implications in planning and management of Nyansiongo Township.

### BIBLIOGRAPHY

- Arimah, B. (1997)**, Review and reassessment of urban development and planning regulations for sustainable development in Nigerian cities. A case study of Ibadan.
- Bartone, C.J. Bernstein, and F. Wright (1990)**, Investment In Solid Waste Management Report No.Wps-405, World Bank PRE Working Papers, Washington D.C .
- Bedcock.B. (1986)**, land and housing policy in Chinese urban development, 1976-86,planning perspectives.
- Bernstein, j. D (1994)**, Land use considerations in urban environment, urban management programme (UMP) Washington D.C.
- Cochrane, G. (1983)**, Policies For Strengthening Local Government, In Rivista Mixicana De Sociologica volume Xxxii Number1 Pp.119-145.
- Doebele, S.P, (1987)**, The evolution of concepts of urban land tenure in developing countries, Habitat.
- ECLAC/UNCHS, (1984)**, Middle Rank Human Settlement in Territorial Organization Strategies in the Latin America And The Caribbean.
- ESCAP, (1984)**, Planning and Management of Human Settlements in the ESCAP Region: With Emphasis on Small and Intermediate Urban Settlement, July.
- Foley, Donald L. (1960)**, British Town Planning One Ideology or Three, British Journal of Sociology (11,211-31).
- Friedmann, J. (1981)**, Urban Bias in Regional Development Policy, In Misra, R.P (Editor) In Humanizing Development. Marazen, Asia.
- Gilbert, A. and Gugler, J. (1983)**, Urban And Regional Systems: A Suitable Case For Treatment in Cities, Poverty and Development; Urbanization in the third World, Oxford University Press.

- Graham, S.L. (1980)**, Latin America. In International Hand Book on Local Government Reorganization (Ed) Donald C. Rowat (Westport), Ct: Greenwood.
- Hardoy, E.J, and Satterthwaite D. (1986)**, Small and Intermediate Urban Centres: Their Role In National Development in the Third World, International Institute For Environment And Development Britain Hodder and Stoughton LTD.
- Herbert, jean Loup. (1970)**, A Community Facing Capitalism of a social Structure, In Rivista Mixican De Sociologica Volume Xxxii Number 1pp.119-45.
- Hermitte, Esther and Harran, C. (1979)** Productive System, Interstitial Institutions and Ways Of Social Articulation in an Argentine NorthWestern Community, In Hermit and Bartlome Editors.
- Hopkins, Nicholus S. (1975)**, A Comparison of the Small Urban Centres in Rural Development: Kita (Mali) and Testuor Tunisia, in Southall Aidan (Editor) Small Centres in Rural Development in Africa, African Studies Programmes University of Wisconsin Madison.
- Hutton, .J. (1972)**, Urban Challenges in East Africa. East Africa Publishing House.
- Jackson, P.W (1976)** (2<sup>nd</sup> ed) Local government, Butterworths, London.
- Kathuri, J.N and Pals. A.D (1993)** Introduction to Educational Research, Egerton Educational Books Series. Egerton University.
- Kenya, Republic, Agricultural Research Institute (KARI) April 200I**, Kenya, Farm Management Hand Book Volume 2 Western.
- Kenya, Republic, (1999)**, Population and Housing Census volume 1.
- Kenya, Republic, (1997)** Sessional Paper No.2 of 1997 on industrial Transportation to the year 2020.
- Kenya, Republic, (1979)**, Development Plan 1979-83, Government Printer, Nairobi.
- Kenya, Republic, (1978)**, Ministry of Water Development Frequency Atlas.

- Kenya, Republic, (1975)**, National Summary Report of Habitat.
- Kenya, Republic, (1999)**, Population and Housing Census volume 1
- Kenya, Republic, UNCHS (Habitat), Belgian development co –operation (1999)**, Strategic structure plan for sustainable development of Nakuru town and its environs, volume 1- July.
- Kingdom, J. (1991)**, Local government and politics in Britain, New York, London, Toronto, Sydney
- Kojima, R. (1987)**, Urbanization and urban problems in china, institute of developing countries, Tokyo.
- Lee, conception, E. (1975)**, **Medenine**: Regional Capital and Small Urban Centres in Tunisian South all Aidan (Editor) Small Urban Centres in Rural Development, African Studies Programme University of Wisconsin Madison.
- Mireri, C. (2000)**, Trends and Instruments of Industrial Development in Kenya. Aachen: Shaker Verlag.
- Mugenda, M.O and Mugenda, A.G. (1999)**, Research methods: Quantitative and Qualitative Approaches, Acts press, Nairobi, Kenya.
- Mumtaz and wegelin, (2001)**, Guiding Cities, UNDP/UNCHS/UMP
- Nyakaana J.B, (1986)**, Kenya's development centre policy: the case of Eldoret, an assessment of its Implications and Impacts, Netherlands Geographical studies, Amsterdam.
- Nyamira District, (1999)**, Population Census, Statistical Office Nyamira
- Nyamira District, (2001)**, Development plan, Nyamira planning office
- Ng'ethe, Njuguna and Mutahi Ngunyi (1991)**, The role of small urban centres in Kenya 's National Development African Urban Quarterly, Volume 6, No.3 and 4 August and November.

- Obudho R.A (1988)**, International Conference on Urban Growth and Spatial Planning Of Nairobi in African Urban Quarterly December 13-17. Nairobi, Kenya.
- Palton M.Q (1990)**; Qualitative Evaluation and Research methods 2<sup>nd</sup> edition, Sage publications, Newbury park, London.
- Richard, Harry W. (1980)**, An Urban Development Strategy for Kenya, In the Journal of Developing areas Volume 15, Number 1, October.
- Rondinelli D.A (1983)**, Secondary Cities in Developing Countries Policies for Diffusing Urbanization, Sage Library and Social Research 145, Sage Publications Inc. U.S .A.
- Rondinelli. D, A. and G. Shabbir Cheema, (1885)**, ‘Urban Services Policies in Metropolitan Areas Meeting the Needs of the Urban Poor in Asia’’ Regional Development Dialogue Vol.6, No.2, 177-190.
- Rondinelli D.A, and Cheema, G.S. (1988)**, Urban service delivery in developing countries; Public and Private Roles in Urban Development, Macmillan press LTD.
- Selltiz, C., Wringhtsman, L.S., and Cook, S.W. (1976)**, (3<sup>rd</sup> Ed) Research Methods in Social Sciences, Holt Rineltart and Winston, New York.
- Stohr,W. and Todling, F.(1979)**, Spatial Equity: Some Antitheses to current Regional Doctrine’ Folmer H. and Oostterhaven J.(editors),Spatial Inequalities and Regional Development, Nijhoff, Boston.
- Taschner, S.P. (1988)**, Diagnosis and Challenges on Housing in Brazil, a paper presented to the Conference on Housing policy, Urban innovation Amsterdam, 27 June-July 1988.
- Townroe, Peter M., (1982)**, The Case of Adaptive Restrain Policies In LCD And Metropolitan Areas, School of Economics and Social Studies University Of East Anglia Uk.
- UNCHS, Habitat, (1999)**, Reassessment of Urban Planning and Development Regulations in Africa cities.

**UNCHS, Habitat, (1990)**, Rental Housing, Proceedings of the Expert Group Meeting to Review Rental Systems and Rental Stability, Jointly Organized by the United Nations Centres for Human Settlements (Habitat) and the Institute for Housing Studies, held at Rotterdam, The Netherlands From 9<sup>th</sup> – 13<sup>th</sup> October 1989.

**UNCHS, Habitat, (1992)**, human settlements sector Review sri-ranka.

**UNCHS (Habitat)(1996)**, An Urbanizing world; Global Report on Human Settlements, oxford University Press.

**UNCHS, Habitat, (1987)**, Shelter, Infrastructure and Services For The Poor In Developing Countries: Some Policy Options.

**UHCHS, (1986)**, The Management of Secondary Cities.

**UNDP/UNCHS/World Bank, (1994)**, Decentralization and It's Implications in service delivery.

**World Bank, (1979)**, Brazil Medium Sized Cities Projects Washington D.C.

**World Bank, (1992)**, World Development Report, Washington, D.C.

**World Bank, (1990a)**, Primary Education: A World Bank Policy Paper. Washington, D.C.

## APPENDICES

## Appendix 1

## HOUSEHOLD QUESTIONNAIRE

The purpose of this questionnaire is to gather information on problems of planning and management of Nyansiongo Township. The study is purely academic. The information provided will be kept confidential.

Questionnaire serial number-----

Interviewer-----

Area/location-----

**Household information**

Q1. Fill in the table below.

Household member	Sex	Age	Education	Occupation	Monthly income

Key to family income in Kshs.

- 1). Less than 5,000
- 2). 5,001-10,000
- 3). 10,001-15,000
- 4). 15,001-20,000
- 5). Above 20, 000

Q2. When did you come to the town? -----

Q3. Why did you move to the town?

- 1). -----
- 2). -----
- 3). -----

**Land uses**

Q 4. which one of the following describes your plot ownership?

- Freehold
- Leasehold
- Government land
- Trust land
- Other specify

Q 5. How did you acquire the land?

- Gift
- Government allocation
- Inheritance
- Buying
- Occupying
- Other (specify)

Q 6. What is the size of your plot?

- Less than 1/4 of an acre
- 1/2 an acre
- 3/4 an acre
- Above one acre

Q7. What land uses have you put on your plot?

- Commercial
- Agriculture
- Residential
- Educational
- Other (specify)

Q8. Are there any cases of incompatible land uses?

- Yes
- No

Q 9. If yes, fill in the table below.

Land use x versus y	Problem	Effects	Current coping strategy

### Service delivery problems

#### Water supply

Q10. Please fill in the table below

Water sources	Long Distance	Poor quality	Unreliable supply	High cost	Coverage	Provider
1. Piped water						
2. Borehole water						
3. well water						
4. River						

water						
5.Roof catchments						

### Energy supply

Q11. Please fill in the table below.

Energy Type	High cost/month	Unreliable supply	Long distance	Inadequate supply	Pollution	Fire disaster	Provider
Electricity							
Paraffin							
Charcoal							
Firewood							
Solar							
Bio-gas							

### Health and education services

Q12. Please fill in the table below.

Service	Poor quality	High costs	Cost per year	Long distance	Inadequate	Provider	Coverage
Health							
Education							

### Housing supply

Q13. What type of house do you live in?

- Flat
- Bungalow
- Maisonette
- Single room
- 2-3roomed unit
- Other (specify)

Q14. Do you own the house you are living in?

- Yes
- NO

Q15. If the house is rented how much do you pay for it in Kshs. Per month -----

Q 16. How do you consider the cost?

- Too low
- Low
- Normal
- Too high

Q17. How do you cope if the cost is too high?

- 1)-----
- 2). -----
- 3). -----

Q18. What material is your house made of?

- Bricks /stone/block with iron sheets
- Bricks /stone/block with tiled roof
- Mud-walled with iron sheets
- Other (specify).

Q19. Are there any problems of accessing housing?

- Yes
- No

Q 20. If yes which ones are they? -----  
-----  
-----

Q 21. What can be done to solve these problems? -----  
-----  
-----  
-----

**Waste collection and disposal**

Q 22 how do you dispose off your human waste?

- Family pit latrines
- Community pit latrines
- Flush toilets
- Septic tank
- Other (specify)

Q 23. How do you dispose off your household waste?

- Collected by the town council
- Collected by private firm
- Not collected
- Nearby dumping site
- Other specify

Q 24. If collected by the town council how often?

- Once a week
- Every two days
- Every month
- Other (specify)

Q 25. If by private firm which one(s)-----

Q 26.How much do you pay for garbage collection per month Kshs.-----

Q 27. Do you have any organizations for waste collection and management?

- Yes
- No

Q 28. Which ones are they? -----

Q 29. If yes to question 27 above, what reasons prompted you into formation of these organizations? -----  
-----

**Overall performance**

Q30. In your opinion how do you consider the service provision of Nyansiongo Township?

- Excellent
- Very good
- Good
- Poor
- Very poor

Q31. Please comment on how you think the service provision in Nyansingo Township can be improved.

1. -----
2. -----
3. -----
4. -----
5. -----
6. -----

## Appendix 2

## Observation Schedule For Nyansiongo Township Land Uses

Name of observer-----Date-----

Please fill the table below.

Type of land use	Available	Not available	Adequate/number	Inadequate/number	Condition
<b>Industrial</b>					
<b>Recreational</b>					
a) Park					
b) Playground					
c) Open space					
<b>Transportation</b>					
Petrol station					
Bus depot					
Railway station					
Air port					
<b>Residential</b>					
Low density					
Medium density					
High density					
<b>Educational</b>					
Pre-primary					
Primary					
Secondary					
<b>Commercial</b>					
Retail					
Wholesale					
Market stalls					
Hotels					
Bank					
Filling station					
Crafts center					
Bars					
Post office					
Other specify					
<b>Public utilities</b>					
Drainage					
Dumpsite					



### Appendix 3

#### Town council interview schedule

Q1. How is your town council structure organized?

Q2. Please fill in the table below.

Department	Existing capacity	Expected capacity	Vacant posts	Qualifications	Problems	Coping strategy

NOTE please use separate paper to answer the questions in the table.

Q3. Do you have development control in your township?

Q4. If yes who administers it?

Q5. Has it been effective?

Q6. If no please state problems encountered during development control process

Q7 Do you have land uses and urban service delivery enforcement mechanisms?

Q8. If yes which ones are they?

Q9. Are they adequate?

Q10. If no why?

Q11 is the community involved in the planning and management of the land uses and urban service delivery within the township?

Q12. If no why?

Q13. If yes how?

Q14. Please comment on how planning and management problems of Nyansiongo Township can be solved.

Q15. What are the other institutions involved in planning and management of land uses and providing of services in you town?

Please fill in the table below.

Institution	Role	Problems	Weakness	Strengths	Coping strategy

Note: Please use a separate paper to answer questions in the table

Q16. What are your sources of revenue?

Q17 is the revenue adequate?

Q18 what revenue collection methods do you use?

Q19. What in your opinion are the weaknesses of the revenue collection methods?

Q20 please comment on the overall performance of the township?

**Appendix 4****Institutional interview schedule**

Q1. Are you involved in any affairs within the township?

Q2. If yes which ones are they?

Q3. How far is your organization involved in planning and management of land uses and urban service delivery within the township?

Q4. What area do you cover if involved?

Q5. If not involved how do you think can you be involved?

Q6. If involved do you have any problems in the planning of the land uses and the providing of the services within the township?

Q7. What do you think are the causes of these problems?

Q8. How do you think can the community be involved in the provision of services and the planning and management of the land uses?

Q9. Please explain the problems encountered in involving the community in planning of the land uses and provision of the services?

Q10. Please comment on how you think the planning of the land uses and service provision can be improved.

Appendix 5

FGD interview guide

1. What problems do you experience?
2. Why do these problems occur?
3. Where do these problems happen?
4. Why does the problem happen?
5. How does the problem happen?
6. What has been done to solve the problems?
7. What else can be done to solve the problem?
8. Who should undertake the solution activities above?

Income	3,119	63	Treasurers Department	
Expenses	1,293	26	Workers Department	
Balance	223,212	00	Community Basis	
Transfer of LAMP	15,621	00	Education Department	
Other Payments	1,003,210	00	Health Department	
Sub Total	3,136,754	00	Sub Total	1,153,226
Income tax			Other payments	
Transfer of LAMP		64	Transfer of LAMP	68,240
Income tax		00	LAMP	742,121
Transfer of LAMP		00	Other payments	
Income tax		00	Government Grant	
Transfer of LAMP		00	Profit of	17,426
Income tax		00	Grand Total	1,351,024
Grand Total	3,527,024	64	Grand Total	3,527,024

## Appendix 6

## General rate fund Summary income and expenditure revenue Account for Nyansiongo town council for 1999/2000

Expenditure	1999/2000		Income	1999/2000	
	KSHS.	CTS		KSHS.	CTS.
Clerk's department	1,083,782	65	Clerk's department	720,872	65
Treasurers Department	778,719	50	Treasurers Department	-	-
Markets Department	25,893	80	Markets Department	1,173,064	00
Community /Basic Education Department.	225,202	00	Community /Basic Education Department.	-	-
Works Department	19,640	00	Works Department	-	-
Civic Department	1,003,559	00	Civic Department	-	-
Sub-Total	<b>3,136,796</b>	<b>95</b>	Sub-Total	<b>1,893,936</b>	<b>65</b>
<b>Other Payments</b>			<b>Other incomes</b>		
Transfer of LATF account opening	7,025	00	Service Charges receipt	678,545	65
Income tax under penalty charges	129,800	00	LATF receipts applied	742,121	00
NHIF under penalty Charges	240,940	00	Ministry of Local government grant	-	-
Provident fund penalty charges	7,467	70	<b>Deficit c/f</b>	<b>207,426</b>	<b>30</b>
<b>Grand Total</b>	<b>3,522,029</b>	<b>65</b>	<b>Grand Total</b>	<b>3,522,029</b>	<b>65</b>

## Appendix 7

## General rate fund Summary income and expenditure revenue Account for Nyansiongo town council for 2000/2001

Expenditure	2000/2001		Income	2000/2001	
	KSHS.	CTS		KSHS.	CTS.
Clerk's department	970,090	00	Clerk's department	129,415	00
Treasurers Department	836,530	00	Tea cess	416,373	00
Civic Department	719,306	00	Pyrethrum cess	13,350	00
Community /Basic Education Department.	156,348	00	Maize cess	41,793	00
Works Department	108,528	00	Market section	1,288,529	00
			Deficit	<b>901,702</b>	<b>00</b>
<b>Grand Total</b>	<b>2,790,532</b>	<b>00</b>	<b>Grand Total</b>	<b>2,790,532</b>	<b>00</b>

Appendix 8  
Nyansiongo LATF estimates for the year 2001/2002

<b>A). Projects</b>	
Completion of the office block	Kshs. 1,500,000.00
Revenue collection vehicles	Kshs.800,000.00
Maintenance	Kshs. 750,508.00
<b>Total</b>	<b>Kshs. 3,050,508.00</b>
<b>B) Personnel</b>	
Operations	Kshs. 470,000.00
Consultants	
LADP	Kshs. 100,000.00
REP	Kshs. 30,000.00
LASDP	Kshs. 50,000.00
Abstract of accounts	Kshs. 20,000.00
<b>Total</b>	<b>Kshs. 650,000.00</b>
<b>c). Dept resolutions.</b>	
NSSF	Kshs.15, 000.00
PAYE	Kshs.150, 000.00
P.F	Kshs.200, 000.00
NHIF	Kshs.96, 200.00
Ciilrs all arrears	Kshs.44, 200.00
Unpaid salaries	Kshs.131, 600.00
Totals	Kshs.637,097.00
<b>Grand Total</b>	<b>Kshs.4,317,605</b>

## Appendix 9

## LATF estimates for the year 2002/2003

<b>(a) Projects:</b>	Kshs. 100, 000
Purchase of tractor	
Rehabilitations of rural road	Kshs. 294, 442
Construction and protection of water springs	Kshs. 84, 874
Construction and renovation of health facilities	Kshs. 44, 874
Fencing of stadium	Kshs. 84, 784
Electricity	Kshs. 141, 026
Maintenance	Kshs. 1, 250,000
<b>Sub-Total</b>	<b>Kshs. 2, 900,000</b>
<b>(b) Personal:</b>	Kshs. 50,000
REP (3)	
LADSDAP (2)	Kshs. 50,000
Abstracts of A/Cs	Kshs. 60, 000
<b>Sub- Totals</b>	<b>Kshs. 160, 000</b>
<b>(C).Operations:</b>	Kshs.767, 508
<b>(d) Debt resources</b>	
NSSF	Kshs. 60, 000
PAYE	Kshs. 50, 000
P.F	Kshs.200, 000
Un paid salaries	Kshs.320, 000
N.H.I.F	Kshs.100, 000
Un paid allowances	Kshs.100, 000
Sub-total	<b>Kshs. 830,000</b>
<b>Grand total</b>	<b>Kshs. 4,657,508</b>